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# Michigan Rehabilitation Code for Existing Buildings

Incorporating the International  
Existing Building Code, 2003 Final  
Draft, Dated August 2001

## Michigan Department of Consumer & Industry Services BUREAU OF CONSTRUCTION CODES



DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

CONSTRUCTION CODE

Filed with the Secretary of State on October 15, 2002.

This rule takes effect on October 31, 2002.

(By authority conferred on the director of the department of consumer and industry services by section 4 of 1972 P.A. 230, MCL 125.1504, and Executive Reorganization Order No. 1996-2, MCL 445.2001)

R 408.30401 to R 408.30499 of the Michigan Administrative Code are amended by adding R 408.30429a as follows:

PART 4. BUILDING CODE

R 408.30429a Compliance.

Rule 429a. The code is amended by adding sections 3409.1 and 3409.2 as follows:

3409.1 Compliance. The provisions of this section are intended to maintain or increase the current degree of public safety, health, and general welfare in existing buildings while permitting repair, alteration, addition, and change of occupancy without requiring full compliance with chapters 2 through 33 of the code, or sections 3401.3 through 3406, except where compliance with other provisions of the code is specifically required in this section.

Exception: Buildings made to comply with the provisions of the Michigan rehabilitation code for existing buildings, R 408.30551 to R 408.30577, shall be deemed to comply with the requirements of the code.

3409.2 Applicability. Structures existing before November 6, 1974, in which work involving additions, alterations, or changes of occupancy shall be made to conform to the requirements of this section or the provisions of sections 3402 through 3406 of the code.

The provisions in sections 3409.2.1 through 3409.2.5 of the code shall apply to existing occupancies that will continue to be, or are proposed to be, in groups A, B, E, F, M, R, S, and U. These provisions shall not apply to buildings that have occupancies in group H or I.

September 1, 2002

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

CONSTRUCTION CODE

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(By authority conferred on the director of the department of consumer and industry services by section 4 of 1972 P.A. 230, MCL 125.1504, and Executive Reorganization Order No. 1996-2, MCL 445.2001)

R 408.30101 to R 408.31194 of the Michigan Administrative Code are amended by adding R 408.30551 to R 408.30577 as follows:

REHABILITATION CODE

R 408.30551 Applicable code.

Rule 551. The international existing building code, hereinafter referred to as "the code," 2003 final draft, dated August 2001, is adopted by reference, as provided in MCL 24.232, as the "Michigan rehabilitation code for existing buildings" with the exception of sections 104.8, 108.2 through 108.6, 112.2, 112.3, 114.3, 506.1.1 through 506.2, and 1005.1.1 through 1005.1.5, and as otherwise noted in these rules. The international existing building code, 2003 final draft, dated August 2001, is available for inspection at the Okemos office of the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes. The international existing building code, 2003 final draft, dated August 2001, may be purchased from the Building Officials and Code Administrators International, Incorporated, 4051 West Flossmoor Road, Country Club Hills, Illinois 60478, or the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes, 2501 Woodlake Circle, Okemos, Michigan 48864, at a cost as of the time of adoption of these rules of \$17.00.

R 408.30552 References to international codes.

Rule 552. All references to the code, international electrical code, international energy code, international residential code, international mechanical code, and international plumbing code in the international existing building code shall mean the Michigan building code, Michigan electrical code, Michigan uniform energy code, Michigan residential code, Michigan mechanical code and Michigan plumbing code, respectively.

R 408.30553 Title.

Rule 553. Section 101.1 of the code is amended as follows:

101.1 Title. These rules shall be known as the Michigan rehabilitation code for existing buildings, hereinafter referred to as "this code."

R 408.30554 Scope.

Rule 554. Section 101.2 of the code is amended as follows:

101.2 Scope. The provisions of this code shall apply to the repair, alteration, change of occupancy, addition, and relocation of existing buildings. A building or portion of a building which has not been previously occupied or used for its intended purpose shall comply with

August 28, 2002

the provisions of the Michigan building code for new construction. Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings, and relocated buildings complying with the provisions of the Michigan building code, the Michigan electrical code, the Michigan residential code, the Michigan mechanical code, and the Michigan plumbing code shall be considered to be in compliance with this code.

R 408.30555 Intent.

Rule 555. Section 101.3 of the code is amended as follows:

101.3 Intent. The purpose of this code is to encourage the continued use and reuse of legally existing buildings and structures through alternative compliance methods. These provisions are intended to improve the public health, safety, and welfare in existing buildings insofar as they are affected by the repair, alteration, change in occupancy, addition, and relocation of existing buildings.

R 408.30556 Compliance.

Rule 556. Section 102.4.2 of the code is amended as follows:

102.4.2 Compliance. Compliance with the structural provisions of the Michigan building code, 1999 national building code, or 1997 uniform building code shall be deemed to exceed or be equivalent to the structural provisions of this code.

R 408.30557 "Building official" defined.

Rule 557. Section 103.2 of the code is amended as follows:

103.2 "Building official" means the person who is appointed and employed by a governmental subdivision charged with the administration and enforcement of the state code or codes and who is registered in accordance with the requirements of 1986 P.A. 54, MCL 338.2301 et seq. Where used in this code, the term code official means "building official".

R 408.30558 Preliminary meeting.

Rule 558. Section 104.2.1 of the code is amended as follows:

104.2.1 Preliminary meeting. When requested by the owner or owner's agent, the building official shall meet with the owner or the owner's agent to discuss plans for the proposed work or change of occupancy before the application for a construction permit in order to establish the specific applicability of the provisions of this code. The building official shall notify the appropriate fire official of the meeting.

Exception: Repairs, and alterations level 1 and level 2.

R 408.30559 Preliminary review.

Rule 559. Section 104.2.2 of the code is amended as follows:

104.2.2 Preliminary review. When a building permit is required by the code, the owner or owner's agent may request a review of preliminary construction documents to determine compliance with this code.

R 408.30560 Annual permit.

Rule 560. Sections 105.1.1 and 105.1.2 of the code are amended as follows:

105.1.1 Annual permit. In place of an individual permit for each alteration to an already approved electrical, gas, mechanical, or plumbing installation, the enforcing agency is authorized to issue an

annual permit upon application therefor to any person, firm, or corporation. The applicant shall be licensed in accordance with the requirements of 1956 P.A. 217, MCL 338.881 et seq., 1984 P.A. 192, MCL 338.971 et seq., or 1929 P.A. 266, MCL 338.901 et seq.

105.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under an annual permit. Access to the records shall be provided at all times and the records shall be filed with the enforcing agency.

R 408.30561 Work exempt from permit.

Rule 561. Section 105.2 of the code is amended as follows:

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

(a) Building, as follows:

(i) Sidewalks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.

(ii) Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.

(iii) Temporary motion picture, television and theater stage sets and scenery.

(iv) Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.

(v) Window awnings supported by an exterior wall of group R-3 or group U occupancies.

(vi) Movable cases, counters and partitions.

(b) Electrical, as follows:

(i) Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

(ii) Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but does apply to equipment and wiring for power supply and to the installations of towers and antennas.

(iii) Temporary testing systems: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

(c) Gas, as follows:

(i) Portable heating appliance.

(ii) Replacement of any minor part that does not alter approval or equipment or make equipment unsafe.

(d) Mechanical, as follows:

(i) Portable heating appliance.

(ii) Portable ventilation equipment.

(iii) Portable cooling unit.

(iv) Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.

(v) Replacement of any part which does not alter its approval or make it unsafe.

(vi) Portable evaporative cooler.

(vii) Self-contained portable refrigeration units not more than 1.5 horsepower.

(e) Plumbing, as follows:

(i) The stopping of leaks in drains, water, soil, waste or vent pipe; however, if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the trap, drainpipe, or waste or vent pipe with new material, then the work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

(ii) The clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, and the removal and reinstallation of water closets, if the repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

R 408.30562 Submittal of documents.

Rule 562. Section 106.1 of the code is amended as follows:

106.1 Submittal of documents. Construction documents, special inspection and structural observation programs, investigation and evaluation reports, and other data shall be submitted in 1 or more sets with each application for a permit. The construction documents shall be prepared by or under the direct supervision of a registered design professional when required by article 20 of 1980 P.A. 299, MCL 339.101 et seq. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

R 408.30563 Fire flow requirements.

Rule 563. Section 106.1.1.2 of the code is amended as follows:

106.1.1.2 Fire flow requirements. The application for permit shall be accompanied by an evaluation of the available fire flow at the building utilizing the existing fire hydrants on the site, public streets, and adjacent sites in accordance with the provisions of section B105 of appendix b of the international fire code.

R 408.30564 Temporary power.

Rule 564. Section 107.3 of the code is amended as follows:

107.3 Temporary power. The building official is authorized to give permission to temporarily supply and use power in part of an electric installation before the installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in the Michigan electrical code.

R 408.30565 Payment of fees.

Rule 565. Section 108.1 of the code is amended as follows:

108.1 Payment of fees. The fees prescribed by section 22 of 1972 P.A. 230, MCL 125.1501 et seq. shall be paid to the enforcing agency of the jurisdiction before a permit to begin work may be issued. In addition, an amendment to a permit necessitating an additional fee shall not be approved until the additional fee has been paid.

R 408.30566 Lowest floor elevation.

Rule 566. Section 109.3.3 of the code is amended as follows:

109.3.3 Lowest floor elevation. For additions and substantial improvements to existing buildings in flood hazard areas, the elevation certification required in the Michigan building code shall be submitted to the building official.

R 408.30567 Special inspections.

Rule 567. Section 109.3.8 of the code is amended as follows:

109.3.8 Special inspections. Special inspections shall be required in accordance with the Michigan building code.

R 408.30568 Altered area use and occupancy classification change.

Rule 568. Section 110.1 of the code is amended as follows:

110.1 Altered area use and occupancy classification change. An altered area of a building shall not be used or occupied, and a change in the existing occupancy classification of a building or portion thereof shall not be made until the building official has issued a certificate of occupancy in accordance with section 13 of 1972 P.A. 230, MCL 125.1501 et seq. The issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of the other ordinances of the jurisdiction.

R 408.30569 Certificate issued.

Rule 569. Section 110.2 of the code is amended as follows:

110.2 Certificate issued. After the building official inspects the building and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy, which shall contain all of the following information:

- (a) The building permit number.
- (b) The address of the structure.
- (c) The name and address of the owner.
- (d) A description of that portion of the structure for which the certificate is issued.
- (e) A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
- (f) The name of the building official.
- (g) The edition of the code under which the permit was issued.
- (h) The use and occupancy in accordance with the provisions of the Michigan building code.
- (i) The type of construction as defined in the Michigan building code.
- (j) The design occupant load and any impact the alteration has on the design occupant load of the area not within the scope of the work.
- (k) If an automatic sprinkler system is provided, whether the sprinkler system is required.
- (l) Any special stipulations and conditions of the building permit.

R 408.30570 General.

Rule 570. Section 112.1 of the code is amended as follows:

112.1 General. Appeals shall be heard in accordance with the provisions of section 14 of 1972 P.A. 230, MCL 125.1501 et seq.

R 408.30571 Violation penalties.

Rule 571. Section 113.4 of the code is amended as follows:

113.4 Violation penalties. (1) It is unlawful for any person, firm, or corporation to violate a provision of this code or fail to conform with any of the requirements thereof, or erect, construct, alter, extend, repair, move, remove, demolish, or occupy any building, structure, or equipment regulated by this code, or cause work to be performed or done in conflict with or in violation of the approved construction documents or directive of the enforcing agency or a permit or certificate issued under this code.

(2) A violator shall be assessed a fine in accordance with section 23 of 1972 P.A. 230, MCL 125.1501 et seq.

R 408.30572 Notice to owner.

Rule 572. Section 114.2 of the code is amended as follows:

114.2 Notice to owner. Upon notice from the enforcing agency, work on any building or structure that has been done contrary to this code or in a dangerous and unsafe manner shall immediately cease. Notice shall be in accordance with section 12 of 1972 P.A. 230, MCL 125.1501 et seq. A person who is served with a stop work order, except for work that the person is directed to perform to remove a violation or unsafe condition, is subject to the penalty provisions prescribed in section 23 of 1972 P.A. 230, MCL 125.1501 et seq.

R 408.30573 Design procedures and seismic forces.

Rule 573. Sections 407.1.1.1, 407.1.1.2, and 407.1.1.3 of the code are amended as follows:

407.1.1.1 Design procedures. The seismic design of existing buildings shall be based upon the procedures specified in the Michigan building code.

407.1.1.2 Level seismic forces. When seismic forces are required to meet the Michigan building code, they shall be based upon 100% of the values in the Michigan building code or FEMA 356, the standard of the Federal Emergency Management Agency, which is adopted in these rules by reference. The standard may be obtained from the Federal Emergency Management Agency, Federal Center Plaza, 500 C Street S.W., Washington DC 20472, at no cost or from the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes, 2501 Woodlake Circle, Okemos, Michigan 48864. This standard may be inspected at the Okemos office of the Michigan department of consumer and industry services. Where FEMA 356 is used, the FEMA 356 basic safety objective (BSO) shall be used for buildings in seismic use group I. For buildings in other seismic use groups, the applicable FEMA 356 performance levels shown in table 407.1.1.2 for BSE - 1 and BSE - 2 earthquake hazard levels shall be used.

407.1.1.3 Reduced level seismic forces. When seismic forces are required to meet reduced Michigan building code levels, they shall be based upon 75% of the assumed forces prescribed in the Michigan building code.

R 408.30574 Accessibility.

Rule 574. Section 506.1 of the code is amended as follows:

506.1 Accessibility. A building, facility, or element that is altered shall comply with the requirements of 1966 P.A. 1, MCL 125.1351 et seq. and the applicable provisions of chapter 11 of the Michigan building code, R 408.31101 et seq.

R 408.30575 High-rise buildings.



Rule 575. Section 702.1 of the code is amended as follows:

702.1 High-rise buildings. Any building having 1 or more occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall comply with the requirements of sections 702.1.1 through 702.1.2.

Exception: The provisions of sections 702.1.1 and 702.1.2 shall apply to buildings having occupied floor levels more than 75 feet above the lowest level of fire department vehicle access where the local unit of government has complied with the provisions of section 403.1 of the Michigan building code, exception 6.

R 408.30576 Accessibility requirements.

Rule 576. Sections 806.1, 812.5, and 1005.1 of the code are amended as follows:

806.1 General. Accessibility in portions of buildings undergoing a change of occupancy classification shall comply with the provisions of R 408.30574.

812.5 Accessibility. Existing buildings or portions thereof that undergo a change of occupancy shall comply with the provisions of R 408.30574.

1005.1 Accessibility requirements. The provisions of R 408.30574 shall apply to buildings and facilities designated as historical structures that undergo a change of occupancy.

R 408.30577 Applicability.

Rule 577. Section 1201.2 of the code is amended as follows:

1201.2 Applicability. Structures existing before November 6, 1974, in which there is work involving additions, alterations, or changes of occupancy shall be made to conform to the requirements of chapter 12 of the code or the provisions of chapters 4 through 10 of the code. The provisions in sections 1201.2.1 through 1201.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in groups A, B, E, F, M, R, and S. The provisions of this rule shall not apply to buildings with occupancies in group H or I.

# International Existing Building Code<sup>TM</sup>



2003

**FINAL DRAFT  
AUGUST 2001**

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***2003 International Existing Building Code™ -- Final Draft***

Publication Date: August, 2001

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# **PREFACE TO THE IEBC FINAL DRAFT**

## **Introduction**

This Final Draft of the *International Existing Building Code*<sup>™</sup> (IEBC) represents another step in a cooperative effort to bring national uniformity to existing building codes. This document was developed by representatives of Building Officials and Code Administrators International, Inc. (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI) and representatives of the industry. The purpose of the Final Draft of the *International Existing Building Code* is to present material to generate public comment in the form of code change proposals to be processed by the IEBC Code Development Committee and ultimately voted upon by the membership of BOCA, ICBO and SBCCI.

## **Development**

The technical committee charged with the task of developing the draft of the IEBC was formed by the International Code Council (ICC). The intent of the technical committee was to develop a draft of a comprehensive existing building code that is consistent with the family of International Codes already published.

The technical content of currently published codes on existing buildings were reviewed and considered by the IEBC drafting committee. While there were many similarities among the documents reviewed, there were marked philosophical differences that were considered carefully by the drafting committee. The drafting committee used the same principles that were used to develop other International Codes. The principles were based on the intent to establish provisions consistent with the scope of an existing building code that adequately protects public health, safety and welfare; provisions that do not necessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction, while at the same time encouraging the use and re-use of existing buildings.

## **Coordination with other family of International Codes**

The incorporation of all regulations in a comprehensive document such as the IEBC necessitates an extensive coordination with other International Codes that contain provisions for existing buildings. Extensive provisions related to existing buildings are found primarily in the *International Building Code*® and *International Fire Code*®. The IEBC drafting committee, other volunteer industry representatives and staff will be developing a comprehensive code change package to be submitted to appropriate code development committees in an effort to coordinate the provisions of the IEBC with all other codes in the family of International Codes.

## **Public Comment**

The meetings of the IEBC Drafting Committee have been open to the public and interested individuals and organizations from across the country participated. A public forum was also held in Portland, Oregon on March 24, 2001 during the ICC Code Development Hearings and the comments received were considered in the development of this Final Draft.

### **Code Change Proposals**

The current opportunity for public comment is provided by means of code change proposals to be submitted by November 15, 2001. Please use the code change proposal form included in this document to submit your changes. The submitted proposals will be processed in the 2002 ICC Code Development Cycle.

### **2002 Code Change Cycle**

Proposed Code Changes for the 2002 Code Development Cycle are due **November 15, 2001**

Starting with the 2002 Code Development Cycle, ALL code changes are to be sent directly to ICC at:

International Code Council, Inc.  
5203 Leesburg Pike, Suite 600 · Falls Church, VA 22041-3401  
(703) 931-4533  
[www.intlcode.org](http://www.intlcode.org)



For office use only: Date Rec'd. \_\_\_\_\_ Log No. \_\_\_\_\_ Proposal No. \_\_\_\_\_

# PUBLIC PROPOSAL FORM

FOR PUBLIC PROPOSALS ON THE ICC CODES AND STANDARDS

PLEASE SEE INSTRUCTIONS (SUBMITTAL RULES OF PROCEDURES). ALL SUBMITTALS MUST BE IN COMPLIANCE WITH THESE PROCEDURES.

**CLOSING DATE: All Proposals Must Be Received by the Announced Closing Date.**

- 1) Indicate the format in which you would like to receive your Report of the Public Hearing (RPH), or Public Proposals Report (PPR):

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(See instructions for list of Names and Acronyms for the I-Codes & I-Standards):

- 5) Revision to: ☐ Section \_\_\_\_\_ ☐ Table \_\_\_\_\_ ☐ Figure \_\_\_\_\_

- 6) **PROPOSAL** Revise as follows (check BOX and state proposed change):

☐ Revise as follows: ☐ Add new text as follows ☐ Delete and substitute as follows: ☐ Delete without Substitution:

Show the proposed NEW or REVISED or DELETED TEXT in legislative format: ~~Line through text to be deleted.~~ Underline text to be added.

☐ PROPOSAL Continued (Attach additional sheets as necessary)

- 7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):

☐ SUPPORTING INFORMATION Continued (Attach additional sheets as necessary)

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(A 3 1/2" disk saved in WordPerfect 6.0, 8.0 or Microsoft word 97 accompanying the hard copy would be appreciated)

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**Mail FORM and DISK to:** ICC Program Manager, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041

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# CHAPTER 1

## ADMINISTRATION

### SECTION 101 GENERAL

**101.1 Title.** These regulations shall be known as the Existing Building Code of [NAME OF JURISDICTION], hereinafter referred to as “this code.”

**101.2 Scope.** The provisions of the *International Existing Building Code* shall apply to the repair, alteration, change of occupancy, addition, and relocation of existing buildings. A building or portion of a building which has not been previously occupied or used for its intended purpose shall comply with the provisions of the *International Building Code* for new construction. Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings and relocated buildings complying with the provisions of the *International Building Code*, *International Plumbing Code*, *International Mechanical Code*, and *International Residential Code* as applicable shall be considered in compliance with the provisions of this code.

**101.3 Intent.** The purpose of this code is to ensure public health, safety and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition, and relocation of existing buildings.

**101.4 Existing buildings.** The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the *International Property Maintenance Code* or the *International Fire Code*, or as is deemed necessary by the code official for the general safety and welfare of the occupants and the public.

**101.5 Maintenance.** Buildings, and parts thereof, shall be maintained in a safe and sanitary condition. The provisions of the *International Property Maintenance Code* shall apply to the maintenance of existing buildings and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety, hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and buildings. All existing devices or safeguards shall be maintained in all existing buildings. The owner or the owner’s designated agent shall be responsible for the maintenance of the building. To determine compliance with this subsection, the code official shall have the authority to require a building to be reinspected. Except where specifically permitted by this code, the code shall not provide the basis for removal or abrogation of fire protection and safety systems and devices in existing buildings.

**101.5.1 Work on individual components or portions.** Where determination is made by the code official that a component or a portion of a building or structure is in need of repair, strengthening or replacement by provisions of this code, only that specific component or portion shall be required to be repaired, strengthened or replaced unless specifically required by other provisions of this code.

**101.5.2 Design values for existing materials and construction.** The incorporation of existing materials, construction and detailing into the structural system shall be permitted when approved by the code official. Minimum quality levels and maximum strength values shall comply with this code.

**101.6 Safeguards during construction.** All construction work covered in this code, including any related demolition, shall comply with the requirements of Chapter 13.

**101.7 Appendices.** The code official is authorized to require rehabilitation and retrofit of buildings, structures or individual structural members in accordance with the appendices of this code if such appendices have been individually adopted. When any of such appendices are specifically referenced in the text of this code, they become a part of this code without any special adoption by the local jurisdiction.

**101.8 Correction of violations of other codes.** Repairs or alterations mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance, adopted pursuant to law, shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such repair or alteration so provides.

### SECTION 102 APPLICABILITY

**102.1 General.** Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

**102.2 Other laws.** The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

**102.3 Application of references.** References to chapter or section numbers, or to provisions not

specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

**102.4 Referenced codes and standards.** The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

**102.4.1 Standards and guidelines for structural evaluation.** The code official shall allow structural evaluation, condition assessment and rehabilitation of buildings, structures or individual structural members based on this code's appendix chapters, referenced standards, guidelines or other approved standards and procedures.

**102.4.2 Compliance with other codes, standards and guides.** Compliance with the structural provisions of the 2000 *International Building Code*, 1997 *Uniform Building Code*, 1999 *National Building Code* and 1997 *Standard Building Code* shall be deemed exceeding or equivalent to compliance with the structural provisions of this code.

**102.5 Partial invalidity.** In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

## SECTION 103 DEPARTMENT OF BUILDING SAFETY

**103.1 Creation of enforcement agency.** The department of building safety is hereby created and the official in charge thereof shall be known as the code official.

**103.2 Appointment.** The code official shall be appointed by the chief appointing authority of the jurisdiction.

**103.3 Deputies.** In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the code official.

## SECTION 104 DUTIES AND POWERS OF CODE OFFICIAL

**104.1 General.** The code official is hereby authorized and directed to enforce the provisions of this code. The code official shall have the authority to render interpretations of this code and to adopt policies and

procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

**104.2 Applications and permits.** The code official shall receive applications, review construction documents and issue permits for the repair, alteration, addition, demolition, change of occupancy and relocation of buildings, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

**104.2.1 Preliminary meeting.** When requested by the permit applicant, the code official shall meet with the permit applicant to discuss plans for the proposed work or change of occupancy prior to the application for a construction permit in order to establish the specific applicability of the provisions of this code.

**Exception:** Repairs, and alterations level 1 and level 2.

**104.2.1.1 Building evaluation.** The code official is authorized to require an existing building to be investigated and evaluated by a registered design professional based upon the circumstances agreed upon at the preliminary meeting to determine the existence of any potential nonconformance with the provisions of this code.

**104.3 Notices and orders.** The code official shall issue all necessary notices or orders to ensure compliance with this code.

**104.4 Inspections.** The code official shall make all of the required inspections, or the code official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The code official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

**104.5 Identification.** The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

**104.6 Right of entry.** Where it is necessary to make an inspection to enforce the provisions of this code, or where the code official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe,

dangerous or hazardous, the code official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the code official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the code official shall have recourse to the remedies provided by law to secure entry.

**104.7 Department records.** The code official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

**104.8 Liability.** The code official, member of the Board of Appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

**104.9 Approved materials and equipment.** Materials, equipment and devices approved by the code official shall be constructed and installed in accordance with such approval.

**104.9.1 Used materials and equipment.** The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the code official.

**104.10 Modifications.** Wherever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural

requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

**104.11 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

**104.11.1 Tests.** Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the code official for the period required for retention.

## **SECTION 105 PERMITS**

**105.1 Required.** Any owner or authorized agent who intends to repair, add to, alter, relocate, demolish, or change the occupancy of a building or to repair, install, add, alter, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the code official and obtain the required permit.

**105.1.1 Annual permit.** In lieu of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified trade persons in the building, structure or on the premises owned or operated by the applicant for the permit.

**105.1.2 Annual permit records.** The person to whom an annual permit is issued shall keep a

detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

**105.2 Work exempt from permit.** Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

**Building:**

1. Sidewalks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.
2. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
3. Temporary motion picture, television and theater stage sets and scenery.
4. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.
5. Window awnings supported by an exterior wall of Group R-3 or Group U Occupancies.
6. Movable cases, counters and partitions not over 5 feet 9 inches (1,753 mm) in height.

**Electrical:**

**Repairs and maintenance:** Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

**Radio and television transmitting stations:** The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but does apply to equipment and wiring for power supply, the installations of towers and antennas.

**Temporary testing systems:** A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

**Gas:**

1. Portable heating appliance.

2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

**Mechanical:**

1. Portable heating appliance;
2. Portable ventilation equipment;
3. Portable cooling unit;
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code;
5. Replacement of any part which does not alter its approval or make it unsafe;
6. Portable evaporative cooler;
7. Self-contained refrigeration system containing 10 pound (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

**Plumbing:**

The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

**105.2.1 Emergency repairs.** Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the code official.

**105.2.2 Repairs.** Application or notice to the code official is not required for ordinary repairs to structures and items listed in Section 105.2. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer,

drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

**105.2.3 Public service agencies.** A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

**105.3 Application for permit.** To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the department of building safety for that purpose. Such application shall:

1. Identify and describe the work in accordance with Chapter 3 to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in Section 106.3.
5. State the valuation of the proposed work.
6. Be signed by the applicant, or the applicant's authorized agent.
7. Give such other data and information as required by the code official.

**105.3.1 Action on application.** The code official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the code official shall reject such application in writing, stating the reasons therefor. If the code official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the code official shall issue a permit therefor as soon as practicable.

**105.3.2 Time limitation of application.** An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the code official is authorized to grant one or more extensions of time for additional periods not

exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

**105.4 Validity of permit.** The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the code official from requiring the correction of errors in the construction documents and other data. The code official is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

**105.5 Expiration.** Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The code official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

**105.6 Suspension or revocation.** The code official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

**105.7 Placement of permit.** The building permit or copy shall be kept on the site of the work until the completion of the project.

## **SECTION 106 CONSTRUCTION DOCUMENTS**

**106.1 Submittal documents.** Construction documents, special inspection and structural observation programs, investigation and evaluation reports, and other data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the code official is authorized to require additional construction documents to be prepared by a registered design professional.

**Exception:** The code official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the

nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

#### **106.1.1 Information on construction documents.**

Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the code official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the code official.

##### **106.1.1.1 Fire protection system shop drawings.**

Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this code and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9 of the *International Building Code*.

**106.1.2 Means of egress.** The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated on every work area of every floor, and in all affected rooms and spaces.

**106.1.3 Exterior wall envelope.** Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including windows, doors, flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves, or parapets, means of drainage, water-resistive membrane, and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the wind and weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

**106.2 Site plan.** The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new

construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The code official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration, repair or change of occupancy,

**106.3 Examination of documents.** The code official shall examine or cause to be examined the construction documents and shall ascertain by such examinations whether the construction or occupancy indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

#### **106.3.1 Approval of construction documents.**

When the code official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Reviewed for Code Compliance." One set of construction documents so reviewed shall be retained by the code official. The other set shall be returned to the applicant, shall be kept at the site of work and shall be open to inspection by the code official or his authorized representative.

**106.3.2 Previous approvals.** This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

**106.3.3 Phased approval.** The code official is authorized to issue a permit for the construction of foundations or any other part of a building before the construction documents for the whole building or have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

**106.3.4 Deferred submittals.** For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the code official within a specified period.

Deferral of any submittal items shall have the prior approval of the code official. The registered design professional in responsible charge shall list the



deferred submittals on the construction documents for review by the code official.

Submittal documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the code official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall not be installed until their design and submittal documents have been approved by the code official.

**106.4 Amended construction documents.** Work shall be installed in accordance with the reviewed construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

**106.5 Retention of construction documents.** One set of approved construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.

**106.6 Design professional in responsible charge.**

**106.6.1 General.** When it is required that documents be prepared by a registered design professional, the code official shall be authorized to require the owner to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The code official shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties. The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

## **SECTION 107 TEMPORARY STRUCTURES AND USES**

**107.1 General.** The code official is authorized to issue a permit for temporary structures and temporary uses.

Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The code official is authorized to grant extensions for demonstrated cause.

**107.2 Conformance.** Temporary structures and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.

**107.3 Temporary power.** The code official is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the ICC Electrical Code.

**107.4 Termination of approval.** The code official is authorized to terminate such permit for a temporary structure or use and to order the temporary structure or use to be discontinued.

## **SECTION 108 FEES**

**108.1 Payment of fees.** A permit shall not be valid until the fees prescribed by law have been paid. Nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

**108.2 Schedule of permit fees.** On buildings electrical, gas, mechanical, and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

**108.3 Building permit valuations.** The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the code official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the code official. Final building permit valuation shall be set by the code official.

**108.4 Work commencing before permit issuance.** Any person who commences any work on a building, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to an additional fee established by the code official that shall be in addition to the required permit fees.

**108.5 Related fees.** The payment of the fee for the construction, alteration, removal or demolition for work done in connection with or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

**108.6 Refunds.** The code official is authorized to establish a refund policy.

## **SECTION 109 INSPECTIONS**

**109.1 General.** Construction or work for which a permit is required shall be subject to inspection by the code official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

**109.2 Preliminary inspection.** Before issuing a permit, the code official is authorized to examine or cause to be examined buildings and sites for which an application has been filed.

**109.3 Required inspections.** The code official, upon notification, shall make the inspections set forth in Sections 109.3.1 through 109.3.10.

**109.3.1 Footing or foundation inspection.** Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.

**109.3.2 Concrete slab or under-floor inspection.** Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the sub floor.

**109.3.3 Lowest floor elevation.** For additions and substantial improvements to existing buildings in flood hazard areas, the elevation certification

required in the *International Building Code* shall be submitted to the code official.

**109.3.4 Frame inspection.** Framing inspections shall be made after the roof deck or sheathing, all framing, fire blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

**109.3.5 Lath or gypsum board inspection.** Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

**Exception:** Gypsum board that is not part of a fire-resistive assembly or a shear assembly.

**109.3.6 Fire-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies shall not be concealed from view until inspected and approved.

**109.3.7 Other inspections.** In addition to the inspections specified above, the code official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the department of building safety.

**109.3.8 Special inspections.** Special inspections shall be required in accordance with the *International Building Code*.

**109.3.9 Final inspection.** The final inspection shall be made after all work required by the building permit is completed.

**109.4 Inspection agencies.** The code official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

**109.5 Inspection requests.** It shall be the duty of the holder of the building permit or their duly authorized agent to notify the code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspection of such work for any inspections that are required by this code.

**109.6 Approval required.** Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code official. The code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or shall notify the permit holder or an agent of the permit holder wherein the same fails to comply

with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code official.

## **SECTION 110 CERTIFICATE OF OCCUPANCY**

**110.1 Altered area use and occupancy classification change.** No altered area of a building shall be used or occupied, and no change in the existing occupancy classification of a building or portion thereof shall be made until the code official has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

**110.2 Certificate issued.** After the code official inspects the building and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the code official shall issue a certificate of occupancy that shall contain the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the code official.
7. The edition of the code under which the permit was issued.
8. The use and occupancy in accordance with the provisions of the *International Building Code*.
9. The type of construction as defined in the *International Building Code*.
10. The design occupant load and any impact the alteration has on the design occupant load of the area not within the scope of the work.
11. If an automatic sprinkler system is provided, whether the sprinkler system is required.
12. Any special stipulations and conditions of the building permit.

**110.3 Temporary occupancy.** The code official is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The code official shall set a time period during which the temporary certificate of occupancy is valid.

**110.4 Revocation.** The code official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

## **SECTION 111 SERVICE UTILITIES**

**111.1 Connection of service utilities.** No person shall make connections from a utility, source of energy, fuel or power to any building or system that is regulated by this code for which a permit is required, until approved by the code official.

**111.2 Temporary connection.** The code official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel or power.

**111.3 Authority to disconnect service utilities.** The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the codes referenced in case of emergency where necessary to eliminate an immediate hazard to life or property. The code official shall notify the serving utility, and wherever possible the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

## **SECTION 112 BOARD OF APPEALS**

**112.1 General.** In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

**112.2 Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

**112.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

## **SECTION 113 VIOLATIONS**

**113.1 Unlawful acts.** It shall be unlawful for any person, firm or corporation to repair, alter, extend, add, move, remove, demolish or change the occupancy of any building or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

**113.2 Notice of violation.** The code official is authorized to serve a notice of violation or order on the person responsible for the repair, alteration, extension, addition, moving, removal, demolition or change in the occupancy of a building in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

**113.3 Prosecution of violation.** If the notice of violation is not complied with promptly, the code official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

**113.4 Violation penalties.** Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who repairs or alters or changes the occupancy of a building or structure in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

## **SECTION 114 STOP WORK ORDER**

**114.1 Authority.** Whenever the code official finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a

dangerous or unsafe manner, the code official is authorized to issue a stop work order.

**114.2 Issuance.** The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

**114.3 Unlawful continuance.** Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

## **SECTION 115 UNSAFE BUILDINGS AND EQUIPMENT**

**115.1 Conditions.** Buildings or existing equipment that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or in which the structure or individual structural members exceed the limits established by the definition of Dangerous in Chapter 2, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe buildings shall be taken down and removed or made safe, as the code official deems necessary and as provided for in this code. A vacant structure that is not secured against entry shall be deemed unsafe.

**115.2 Record.** The code official shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

**115.3 Notice.** If an unsafe condition is found, the code official shall serve on the owner, agent or person in control of the structure, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe building to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the code official acceptance or rejection of the terms of the order.

**115.4 Method of service.** Such notice shall be deemed properly served if a copy thereof is (a) delivered to the owner personally; (b) sent by certified or registered mail addressed to the owner at the last known address with the return receipt requested; or (c) delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by

such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

**115.5 Restoration.** The building or equipment determined to be unsafe by the code official is permitted to be restored to a safe condition. To the extent that repairs, alterations or additions are made or a change of occupancy occurs during the restoration of the, building such repairs, alterations, additions or change of occupancy shall comply with the requirements of This code.

## **SECTION 116 EMERGENCY MEASURES**

**116.1 Imminent danger.** When, in the opinion of the code official, there is imminent danger of failure or collapse of a building which endangers life, or when any building or part of a building has fallen and life is endangered by the occupation of the building, or when there is actual or potential danger to the building occupants or those in the proximity of any structure because of explosives, explosive fumes or vapors or the presence of toxic fumes, gases or materials, or operation of defective or dangerous equipment, the code official is hereby authorized and empowered to order and require the occupants to vacate the premises forthwith. The code official shall cause to be posted at each entrance to such structure a notice reading as follows: "This Structure Is Unsafe and Its Occupancy Has Been Prohibited by the Code Official." It shall be unlawful for any person to enter such structure except for the purpose of securing the structure, making the required repairs, removing the hazardous condition or of demolishing the same.

**116.2 Temporary safeguards.** Notwithstanding other provisions of this code, whenever, in the opinion of the code official, there is imminent danger due to an unsafe condition, the code official shall order the necessary work to be done, including the boarding up of openings, to render such structure temporarily safe whether or not the legal procedure herein described has been instituted; and shall cause such other action to be taken as the code official deems necessary to meet such emergency.

**116.3 Closing streets.** When necessary for public safety, the code official shall temporarily close structures and close, or order the authority having jurisdiction to close, sidewalks, streets, public ways and places adjacent to unsafe structures, and prohibit the same from being utilized.

**116.4 Emergency repairs.** For the purposes of this section, the code official shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

**116.5 Costs of emergency repairs.** Costs incurred in the performance of emergency work shall be paid by the jurisdiction. The legal counsel of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located for the recovery of such costs.

**116.6 Hearing.** Any person ordered to take emergency measures shall comply with such order forthwith. Any affected person shall thereafter, upon petition directed to the appeals board, be afforded a hearing as described in this code.

## **SECTION 117 DEMOLITION**

**117.1 General.** The code official shall order the owner of any premises upon which is located any structure, which in the code official's judgment is so old, dilapidated or has become so out of repair as to be dangerous, unsafe, insanitary or otherwise unfit for human habitation or occupancy, and such that it is unreasonable to repair the structure, to demolish and remove such structure; or if such structure is capable of being made safe by repairs, to repair and make safe and sanitary or to demolish and remove at the owner's option; or where there has been a cessation of normal construction of any structure for a period of more than two years, to demolish and remove such structure.

**117.2 Notices and orders.** All notices and orders shall comply with Section 113.

**117.3 Failure to comply.** If the owner of a premises fails to comply with a demolition order within the time prescribed, the code official shall cause the structure to be demolished and removed, either through an available public agency or by contract or arrangement with private persons, and the cost of such demolition and removal shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate.

**117.4 Salvage materials.** When any structure has been ordered demolished and removed, the governing body or other designated officer under said contract or arrangement aforesaid shall have the right to sell the salvage and valuable materials at the highest price obtainable. The net proceeds of such sale, after deducting the expenses of such demolition and removal, shall be promptly remitted with a report of such sale or transaction, including the items of expense and the amounts deducted, for the person who is entitled thereto, subject to any order of a court. If such a surplus does not remain to be turned over, the report shall so state.



## CHAPTER 2 DEFINITIONS

### SECTION 201 GENERAL

**201.1 Scope.** Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

**201.2 Interchangeability.** Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the other *International* codes, such terms shall have the meanings ascribed to them as in those codes.

**201.4 Terms not defined.** Where terms are not defined through the methods authorized by this chapter, such terms shall have ordinarily accepted meanings such as the context implies.

### SECTION 202 GENERAL DEFINITIONS

**Addition.** An extension or increase in floor area, number of stories, or height of a building or structure.

**Alteration.** Any construction or renovation to an existing structure other than repair or addition. Alterations are classified as Level 1, Level 2 and Level 3

**Change of Occupancy.** A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.

**Dangerous.** Any building or structure or any individual member with any of the structural conditions or defects described below shall be deemed dangerous :

1. The stress in a member or portion thereof, due to all factored dead and live loads, is more than one and one third the nominal strength allowed in the *International Building Code* for new buildings of similar structure, purpose or location.
2. Any portion, member or appurtenance thereof likely to fail, or to become detached or dislodged, or to collapse and thereby injure persons.
3. Any portion of a building, or any member, appurtenance or ornamentation on the exterior thereof is not of sufficient strength or stability, or is not so anchored, attached or fastened in place so as to be capable of resisting a wind pressure of

two thirds of that specified in the *International Building Code* for new buildings of similar structure, purpose or location without exceeding the nominal strength permitted in the *International Building Code* for such buildings.

4. The building, or any portion thereof, is likely to partially or completely collapse because of (a) dilapidation, deterioration or decay; (b) construction in violation of the *International Building Code*; (c) the removal, movement or instability of any portion of the ground necessary for the purpose of supporting such building; (d) the deterioration, decay or inadequacy of its foundation; (e) damage due to fire, earthquake, wind or flood; or (f) any other similar cause, or
5. The exterior walls or other vertical structural members list, lean or buckle to such an extent that a plumb line passing through the center of gravity does not fall inside the middle one third of the base.

**Equipment or Fixture.** Any plumbing, heating, electrical, ventilating, air conditioning, refrigerating and fire protection equipment, and elevators, dumb waiters, escalators, boilers, pressure vessels and other mechanical facilities or installations, which are related to building services. Equipment or fixture shall not include manufacturing, production or process equipment, but shall include connections from building service to process equipment.

**Existing Building.** A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

**Flood Hazard Area.** The greater of the following two areas:

1. The area within a flood plain subject to a 1 percent or greater chance of flooding in any year, or
2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

**Historic Building.** Any building or structure that is (a) listed in the State or National Register of Historic Places, (b) designated as a historic property under local or state designation, law, or survey, (c) certified as a contributing resource within a National Register listed or locally designated historic district, or (d) with an opinion or certification that the property is eligible to be listed on the

National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places.

**Load Bearing Element.** Any column, girder, beam, joist, truss, rafter, wall, floor or roof sheathing which supports any vertical load in addition to its own weight, and/or any lateral load.

**Rehabilitation.** Any work, as described by the categories of work defined herein, undertaken in an existing building.

**Rehabilitation, Seismic.** Work conducted to improve the seismic lateral force resistance of an existing building.

**Repair.** The restoration to good or sound condition any part of an existing building for the purpose of its maintenance

**Seismic Loading.** The assumed forces prescribed herein, related to the response of the structure to earthquake motions, to be used in the analysis and design of the structure and its components.

**Structural Frame.** The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.

**Substantial Damage.** For the purpose of determining compliance with the flood provisions of this code, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Substantial Improvement.** For the purpose of determining compliance with the flood provisions of this code, any repair, alteration, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the code official and that

are the minimum necessary to assure safe living conditions.

2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

**Substantial Structural Damage.** A condition where

1. The vertical elements of the lateral force resisting system in any story, in any direction and taken as a whole, have suffered damage such that the lateral load-carrying capacity has been reduced by more than 20 percent from its pre-damaged condition, or
2. The vertical load carrying components supporting more than 30 percent of the structure's floor or roof area have suffered a reduction in vertical load carrying capacity to below 75% of the *International Building Code* required strength levels calculated by either the strength or allowable stress method.

**Technically Infeasible.** An alteration of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features that are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

**Unsafe Buildings or Equipment.** Buildings or existing equipment that are unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition.

**Work Area.** That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed, and portions of the building where work not initially intended by the owner is specifically required by this code.



## CHAPTER 3

# CLASSIFICATION OF WORK

### SECTION 301 GENERAL

**301.1 Scope.** The work performed on an existing building shall be classified in accordance with this chapter.

**301.2 Work area.** The work area, as defined in Chapter 2, shall be identified on the construction documents.

**301.3 Compliance alternatives.** The provisions of Chapters 4 through 10 are not applicable where the building complies with Chapter 12.

**301.4 Occupancy and Use.** When determining the appropriate application of the referenced sections of this code, the occupancy and use of a building shall be determined in accordance with Chapter 3 of the *International Building Code*.

### SECTION 302 REPAIRS

**302.1 Scope.** Repairs, as defined in Chapter 2, include the patching or restoration of materials, elements, equipment or fixtures for the purpose of maintaining such materials, elements, equipment or fixtures in good or sound condition.

**302.2 Application.** Repairs shall comply with the provisions of Chapter 4.

### SECTION 303 ALTERATION - LEVEL 1

**303.1 Scope.** Level 1 alterations include the removal and replacement, or the covering of existing materials, elements, equipment or fixtures using new materials, elements, equipment or fixtures that serve the same purpose.

**303.2 Application.** Level 1 alterations shall comply with the provisions of Chapter 5.

### SECTION 304 ALTERATION - LEVEL 2

**304.1 Scope.** Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

**304.2 Application.** Level 2 alterations shall comply with the provisions of Chapter 5 for Level 1 alterations as well as the provisions of Chapter 6.

### SECTION 305 ALTERATION - LEVEL 3

**305.1 Scope.** Level 3 alterations apply where the work area exceeds 50% of the aggregate area of the building

**305.2 Application.** Level 3 alterations shall comply with the provisions of Chapters 5 and 6 for Level 1 and 2 alterations, respectively, as well as the provisions of Chapter 7.

### SECTION 306 CHANGE OF OCCUPANCY

**306.1 Scope.** Change of occupancy provisions apply where the activity is classified a change of occupancy as defined in Chapter 2.

**306.2 Application.** Changes of occupancy shall comply with the provisions of Chapter 8.

### SECTION 307 ADDITIONS

**307.1 Scope.** Provisions for additions shall apply where work is classified an addition as defined in Chapter 2,

**307.2 Application.** Additions to existing buildings shall comply with the provisions of Chapter 9.

### SECTION 308 HISTORIC BUILDINGS

**308.1 Scope.** Historic buildings provisions shall apply to buildings classified as historic as defined in Chapter 2.

**308.2 Application.** Except as specifically provided for in Chapter 10, historic buildings shall comply with applicable provisions of this code for the type of work being performed

### SECTION 309 RELOCATED BUILDINGS

**309.1 Scope.** Relocated buildings provisions shall apply to relocated or moved buildings.

**309.2 Application.** Relocated buildings shall comply with the provisions of Chapter 11.



## CHAPTER 4 REPAIRS

### SECTION 401 GENERAL

**401.1 Scope.** Repairs, as described in Section 302, shall comply with the requirements of this Chapter. Repairs to historic buildings shall comply with this chapter, except as modified in Chapter 10.

**401.2 Permitted materials.** Except as otherwise required herein, work shall be done using materials permitted by the applicable code for new construction or using like materials such that no hazard to life, health or property is created.

**401.3 Conformance.** The work shall not make the building less conforming with the building, plumbing, mechanical, electrical or fire codes of the jurisdiction, or with alternative materials, design and methods of construction or any previously approved plans, modifications, alternate methods or compliance alternatives, than it was before the repair was undertaken.

**401.4 Flood hazard areas.** In flood hazard areas, repairs that constitute substantial improvement shall require that the building comply with *International Building Code* Section 1612.

### SECTION 402 SPECIAL USE AND OCCUPANCY

**402.1 General.** Repair of buildings, classified as special use or occupancy as described in the *International Building Code*, shall comply with the requirements of this chapter.

### SECTION 403 BUILDING ELEMENTS AND MATERIALS

**403.1 Hazardous materials.** Hazardous materials no longer permitted, such as asbestos and lead-based paint, shall not be used.

**403.2 Glazing in hazardous locations.** Replacement glazing in hazardous locations shall comply with the Safety Glazing requirements of the *International Building Code* or *International Residential Code* as applicable:

**Exception:** Glass block walls, louvered windows and jalousies repaired with like materials.

### SECTION 404 FIRE PROTECTION

**404.1 General.** Fire protection requirements for buildings undergoing repair shall comply with Section 401.1 and scoping provisions of Chapter 1 where applicable.

### SECTION 405 MEANS OF EGRESS

**405.1 General.** Means of egress requirements for buildings undergoing repair shall comply with Section 401.1 and the scoping provisions of Chapter 1 where applicable.

### SECTION 406 ACCESSIBILITY

**406.1 General.** Repairs shall be done in a manner that maintains the level of accessibility provided.

### SECTION 407 STRUCTURAL

**407.1 General.** Repairs of structural elements shall comply with this section.

**407.1.1 Seismic Design.** Seismic design of an existing building and its components shall be based upon the assumed forces related to the response of the structure to earthquake motions,

**407.1.1.1 Design procedures.** The seismic design of existing building shall be based upon the procedures specified in the *International Building Code*, Appendix A of this code (GSREB), ASCE 31-XX, or FEMA 356.

**407.1.1.2 IBC level seismic forces.** When seismic forces are required to meet the *International Building Code* level, they shall be based upon 100% of the values in the *International Building Code* or FEMA 356. Where FEMA 356 is used, the FEMA 356 Basic Safety Objective (BSO) shall be used for buildings in Seismic Use Group I. For Buildings in other Seismic Use Groups the applicable FEMA 356 performance levels shown in Table 407.1.1.2 for BSE-1 and BSE-2 Earthquake Hazard Levels shall be used.

**407.1.1.3 Reduced IBC level seismic forces.** When seismic forces are required to meet reduced *International Building Code* levels, they

shall be based upon 75% of the assumed forces prescribed in the *International Building Code*, applicable chapters in Appendix A of this code (GSREB), the applicable performance level of ASCE 31-XX as shown in Table 407.1.1.2, or the applicable performance level for the BSE-1 Earthquake Hazard Level of FEMA 356 shown in Table 407.1.1.2.

**TABLE 407.1.1.2**  
**IBC SEISMIC USE GROUP EQUIVALENTS TO FEMA 356**  
**AND ASCE 31-XX PERFORMANCE LEVELS (NOTE 1)**

Seismic Use Group (Based on IBC Table 1604.5)	Performance Levels of ASCE 31-XX and FEMA 356 BSE-1 Earthquake Hazard Level	Performance Levels of FEMA 356 BSE-2 Earthquake Hazard Level
I	Life Safety (LS)	Collapse Prevention (CP)
II	Note 2	Note 2
III	Immediate Occupancy (IO)	Life safety (LS)
IV	Life Safety (LS)	Collapse Prevention (CP)

Notes :

1. The charging provisions for Seismic Use Group equivalents to ASCE 31-XX and FEMA 356 BSE-1 for Reduced *International Building Code* Level Seismic Forces are in Section 407.1.1.3
2. Values shall be taken as half way between the values for the CP and LS Performance levels

**407.1.2 Wind design.** Wind design of existing buildings shall be based upon the procedures specified in the *International Building Code* or the *International Residential Code* as applicable.

**407.2 Reduction of strength.** Repairs shall not reduce the structural strength or stability of the building, structure or any individual member thereof.

**Exception:** Such reduction shall be allowed provided the capacity is not reduced to below the *International Building Code* levels.

**407.3 Damaged buildings.** Damaged buildings shall be repaired in accordance with this section.

**407.3.1 New structural frame members.** New structural frame members, used in the repair of damaged buildings, including anchorage and connections, shall comply with the *International Building Code*.

**Exception:** For the design of new structural frame members connected to existing structural frame members, the use of reduced *International Building Code* level seismic forces as specified in Section 407.1.1.3 shall be permitted.

**407.3.2 Substantial structural damage.** buildings which have sustained substantial structural damage shall comply with this section

**407.3.2.1 Engineering evaluation and analysis.**

An engineering evaluation and analysis which establishes the structural adequacy of the damaged building shall be prepared by a registered design professional and submitted to the code official. The evaluation and analysis may assume that all damaged structural elements and systems have their original strength and stiffness. The seismic analysis shall be based upon one of the procedures specified in Section 407.1.1

**407.3.2.1.1 Extent of repair.** The evaluation and analysis shall demonstrate that the building once repaired complies with the wind and seismic provisions of the *International Building Code*.

**Exception:** The use of reduced *International Building Code* level seismic forces as specified in Section 407.1.1.3 shall be permitted in the design of the repair.

**407.3.3 Below substantial structural damage.**

Repairs to buildings damaged to a level below the substantial structural damage level as defined in Section 202 shall be allowed to be made with the materials, methods and strengths in existence prior to the damage unless such existing conditions are dangerous as defined in Chapter 2. New structural frame members, as defined in chapter 2, shall comply with Section 407.3.1.

**407.3.4 Other uncovered structural elements.**

Where in the course of conducting repairs, other uncovered structural elements are found to be unsound or otherwise structurally deficient, such elements shall be made to conform to the requirements of Section 407.3.2.1.1.

**407.3.5 Flood hazard areas.** In flood hazard areas, damaged buildings that sustain substantial damage shall be brought into compliance with *International Building Code* Section 1612.

**407.4 Re-roofing.** Re-roofing shall comply with Section 507.2.1.

**SECTION 408**  
**ELECTRICAL**

**408.1 Material .** Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material.

**Exceptions:**

1. Replacement of electrical receptacles shall comply with the applicable requirements of Article 210-7-(d) of NFPA 70.
2. Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Article 240-51-(b) of NFPA 70.
3. For replacement of non-grounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system, or to any accessible point on the grounding electrode conductor in accordance with Article 250-130-(c) of NFPA 70.
4. Non-"hospital grade" receptacles in patient bed locations of Group 1-2 shall be replaced with "hospital grade" receptacles, as required by NFPA 99 and Art. 517 of NFPA 70.
5. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Art. 250-140 of NFPA 70.

**SECTION 409  
MECHANICAL**

**409.1 General.** Existing mechanical systems undergoing repair shall comply with Section 401.1 and the scoping provisions of Chapter 1 where applicable.

**SECTION 410  
PLUMBING**

**410.1 Materials.** The following plumbing materials and supplies shall not be used:

1. Sheet and tubular copper and brass trap and tailpiece fittings less than the minimum wall thickness of .027" (0.69 mm) .

2. Solder having more than 0.2% lead in the repair of potable water systems.
3. Water closets having a concealed trap seal or an unventilated space or having walls that are not thoroughly washed at each discharge in accordance with ASME A112.19.2.
4. The following types of joints shall be prohibited:
  - 4.1. Cement or concrete joints.
  - 4.2. Mastic or hot-pour bituminous joints.
  - 4.3. Joints made with fittings not approved for the specific installation.
  - 4.4. Joints between different diameter pipes made with elasto-meric rolling O-rings.
  - 4.5. Solvent-cement joints between different types of plastic pipe.
  - 4.6. Saddle-type fittings.
5. The following type of traps are prohibited:
  - 5.1. Traps that depend on moving parts to maintain the seal.
  - 5.2. Bell traps
  - 5.3. Crown-vented traps
  - 5.4. Traps not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of an approved material that is resistant to corrosion and degradation.

**410.2 Water closet replacement.** When any water closet is replaced, the replacement water closet shall comply with the *International Plumbing Code*. The maximum water consumption flow rates and quantities for all replaced water closets shall be 1.6 gallons (6 L) per flushing cycle.

**Exception :** Blowout design water closets [3.5 gallons (13 L) per flushing cycle].



# CHAPTER 5

## ALTERATIONS - LEVEL 1

### SECTION 501 GENERAL

**501.1 Scope.** Level 1 alterations, as described in Section 303 shall comply with the requirements of this Chapter. Level 1 alterations to historic buildings shall comply with this chapter, except as modified in Chapter 10.

**501.2 Conformance.** An existing building or portion thereof shall not be altered such that the building becomes less safe than its existing condition. If, in the alteration the current level of safety or sanitation is to be reduced, the portion altered shall conform to the requirements of the *International Building Code*.

**501.3 Flood hazard areas.** In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with *International Building Code* Section 1612.

### SECTION 502 SPECIAL USE AND OCCUPANCY

**502.1 General.** Alteration of buildings, classified as special use and occupancy as described in the *International Building Code*, shall comply with the requirements of Section 501.1 and the scoping provisions of Chapter 1 where applicable.

### SECTION 503 BUILDING ELEMENTS AND MATERIALS

**503.1 Interior finishes.** All newly installed interior finishes shall comply with the flame spread requirements of the *International Building Code*.

**503.2 Carpeting.** New carpeting used as an interior floor finish material shall comply with the radiant flux requirements of the *International Building Code*.

**503.3 Materials and methods:** All new work shall comply with materials and methods requirements in the *International Building Code*, *International Mechanical Code*, *International Plumbing Code*, *International Energy Conservation Code* and ICC Electrical Code as applicable, that specify material standards, detail of installation and connection, joints, penetrations and continuity of any element, component or system in the building.

### SECTION 504

### FIRE PROTECTION

**504.1 Smoke detectors in Group R and I-1 occupancies.** In buildings of Use Groups R and I-1, newly installed smoke detectors that are located closer than five feet to a kitchen or bathroom area shall be of photoelectric type only.

### SECTION 505 MEANS OF EGRESS

**505.1 General.** Means of egress for buildings undergoing alteration shall comply with the requirements of Section 501.1 and the scoping provisions of Chapter 1 where applicable.

### SECTION 506 ACCESSIBILITY

**506.1 Accessibility.** A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 of the *International Building Code*, Sections 506.1.1 thru 506.1.15 and ICC/ANSI A117.1, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

#### Exceptions:

1. The altered element or space is not required to be on an accessible route, unless required by Section 506.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. Type B dwelling units required by Section 1107.5.4 of the *International Building Code* are not required to be provided in existing buildings and facilities.

**506.1.1 Elevators.** Altered elements of existing elevators shall comply with ASME A17.1 and ICC/ANSI A117.1. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

**506.1.2 Platform lifts.** Platform (wheelchair) lifts complying with ICC/ANSI A117.1 and installed in accordance with ASME A17.1 shall be permitted as a component of an accessible route.

### **506.1.3 Stairs and escalators in existing buildings.**

In alterations where an escalator or stair is added where none existed previously an accessible route shall be provided in accordance with Sections 1104.4 and 1104.5 of the *International Building Code*.

**506.1.4 Ramps.** Where steeper slopes than allowed by Section 1003.3.4.1 are necessitated by space limitations, the slope of ramps in or providing access to existing buildings or facilities shall comply with Table 506.1.4.

**506.1.5 Dining areas.** An accessible route to raised or sunken dining areas, or to outdoor seating areas is not required provided that the same services and decor are provided in an accessible space usable by any occupant and not restricted to use by people with a disability.

**506.1.6 Performance areas.** Where it is technically infeasible to alter performance areas to be on an accessible route, at least one of each type of performance area shall be made accessible.

**506.1.7 Assembly areas.** Seating shall adjoin an accessible route that also serves as a means of egress. Where it is technically infeasible to disperse accessible seating throughout an altered assembly area, the minimum required number of wheelchair space clusters shall be one-half of that required by Section 1107.2.2.1 of the *International Building Code*. In existing assembly seating areas with a mezzanine, where the main level provides three-fourths or more of the total seating capacity, wheelchair space clusters are permitted to be dispersed on the main level. Each accessible seating area shall have provisions for companion seating.

**506.1.8 Sleeping rooms and accommodations.** Where I-1 sleeping rooms, I-2 sleeping rooms or patient rooms, I-3 residential units, or R-1 and R-2 sleeping accommodations are being altered or added, the requirements of Section 1107 of the *International Building Code* for accessible rooms and Chapter 9 for accessible alarms apply only to the quantity of spaces being altered or added.

**506.1.9 Toilet rooms.** Where it is technically infeasible to alter existing toilet and bathing facilities to be accessible, an accessible unisex toilet or bathing facility is permitted. The unisex facility shall be located on the same floor and in the same area as the existing facilities.

**506.1.10 Dressing, fitting and locker rooms.** Where it is technically infeasible to provide accessible dressing, fitting or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided.

Where separate sex facilities are provided, accessible rooms for each sex shall be provided. Separate sex facilities are not required where only unisex rooms are provided.

**506.1.11 Check-out aisles.** Where check-out aisles are altered in facilities having a selling space of 5,000 square feet (465 m<sup>2</sup>) or more, at least one check-out aisle serving each function shall be made accessible.

**506.1.12 Dispersion of seating at fixed or built-in tables, counters, or work surfaces.** Accessible seating at fixed or built-in tables, counters or work surfaces shall be distributed throughout the space or facility as much as technically feasible.

**506.1.13 Sales and service counters.** Where it is technically infeasible for existing counters for sales or distribution of goods or services to be made accessible, an accessible auxiliary counter shall be provided.

**506.1.14 Thresholds.** The maximum height of thresholds at doorways shall be 3/4 inch (19.1 mm). Such threshold shall have beveled edges on each side.

**506.1.15 Extent of application.** An alteration of an existing element, space, or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction. Alterations shall not reduce or have the effect of reducing accessibility of a building, portion of a building, or facility.

**506.2 Alterations affecting an area containing a primary function.** Where an alteration affects the accessibility to, or contains an area of primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function. For the purposes of complying with Section 506.2, an area of primary function shall be defined by applicable provisions of 49 CFR Part 37.43(c) or 28 CFR Part 36.403.

#### **Exceptions:**

1. The costs of providing the accessible route is not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical



systems, installation or alteration of fire-protection systems, and abatement of hazardous materials.

4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

## SECTION 507 STRUCTURAL

**507.1 General.** Where alteration work includes replacement of equipment that is supported by the building or where a re-roofing permit is required, the structural provisions of this section shall apply.

**507.2 Design criteria .** Existing structural components supporting alteration work shall comply with this section.

### **507.2.1 Replacement of roofing or equipment.**

Where replacement of roofing or equipment results in additional dead loads, structural components supporting such re-roofing or equipment shall comply with the vertical load requirements of the *International Building Code*.

#### **Exceptions :**

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings constructed in accordance with the *International Residential Code* or the conventional construction methods of the *International Building Code* and where the additional dead load from the equipment is not increased by more than 5 percent.

**507.2.2 Parapet bracing and wall anchors for re-roof permits.** Unreinforced masonry bearing wall buildings classified as Seismic Design Category D, E or F shall have parapet bracing and wall anchors installed at the roof line whenever a re-roofing permit is issued. Such parapet bracing and wall anchors shall be designed in accordance with the reduced *International Building Code* level seismic forces as specified in Section 407.1.1.3 and design procedures of Section 407.1.1.1.

**507.3 Roof diaphragm.** Where roofing materials are removed from more than 50% of the roof diaphragm of a building or section of a building where the roof diaphragm is a part of the main wind force resisting system the integrity of the roof diaphragm shall be evaluated and if found deficient due to insufficient or deteriorated connections such connections shall be provided or replaced.

**TABLE 506.1.4  
RAMPS**

SLOPE	MAXIMUM RISE
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches



## CHAPTER 6

### ALTERATIONS - LEVEL 2

#### SECTION 601 GENERAL

**601.1 Scope.** Level 2 alterations, as described in Section 304 shall comply with the requirements of this Chapter.

**Exception:** Buildings in which the reconfiguration is exclusively the result of compliance with the accessibility requirements of Section 506.2 shall be permitted to comply with Chapter 5.

**601.2 Alteration level 1 compliance.** In addition to the requirements of this chapter, all work shall comply with the requirements of Chapter 5.

**601.3 Compliance.** All new construction elements, components and systems and spaces shall comply with the requirements of the *International Building Code*.

##### Exceptions:

1. Openable windows may be added without requiring compliance with the light and ventilation requirements of the *International Building Code*.
2. Newly installed electrical equipment shall comply with the requirements of Section 608.0.
3. Dead end corridors in newly constructed spaces need only comply with the provisions of Section 705.
4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet.

#### SECTION 602 SPECIAL USE AND OCCUPANCY

**602.1 General.** Alteration of buildings, classified as special use and occupancy as described in the *International Building Code*, shall comply with the requirements of Section 601.1 and the scoping provisions of Chapter 1 where applicable.

#### SECTION 603 BUILDING ELEMENTS AND MATERIALS

**603.1 Scope.** The requirements of this section are limited to work areas in which Level 2 alterations are being performed, and shall apply beyond the work area where specified.

**603.2 Vertical openings.** Existing vertical openings shall comply with the provisions of Sections 603.2.1, 603.2.2 and 603.2.2.

**603.2.1 Existing Vertical Openings.** All existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire resistance rating of not less than one hour with approved opening protectives.

##### Exceptions:

1. Where vertical opening enclosure is not required by the *International Building Code* or the *International Fire Code*.
2. Interior vertical openings other than stairways may be blocked at the floor and ceiling of the work area by installation of not less than two inches (50.8 mm) of solid wood or equivalent construction.
3. The enclosure shall not be required where:
  - 3.1. connecting the main floor and mezzanines; or
  - 3.2. all the following conditions are met:
    - (1) The communicating area has a low hazard occupancy, or has a moderate hazard occupancy which is protected throughout by an automatic sprinkler system, and
    - (2) The lowest or next to the lowest level is a street floor; and
    - (3) The entire area is open and unobstructed in a manner such that it may be assumed that a fire in any part of the interconnected spaces will be readily obvious to all of the occupants; and
    - (4) Exit capacity is sufficient to provide egress simultaneously for all the occupants of all levels by considering all areas to be a single floor area for the determination of required exit capacity; and
    - (5) Each floor level, considered separately, has at least one-half of its individual required exit capacity provided by an exit or exits leading directly out of that

- level without having to traverse another communicating floor level or be exposed to the smoke or fire spreading from another communicating floor level.
4. In Group A Occupancies, a minimum 30 minute enclosure shall be provided to protect all vertical openings not exceeding three stories.
  5. In Group B Occupancies, a minimum 30 minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 603.2.1 shall not be required:
    - 5.1. in a building not exceeding 3,000 square feet (279 m<sup>2</sup>) floor; or
    - 5.2. when the building is protected throughout by an approved automatic fire sprinkler system.
  6. In Group E Occupancies, the enclosure shall not be required for vertical openings not exceeding three stories when the building is protected throughout by an approved automatic fire sprinkler system.
  7. In Group F Occupancies, the enclosure shall not be required under the following conditions:
    - 7.1. for vertical openings not exceeding three stories; or
    - 7.2. In special purpose occupancies when necessary for manufacturing operations and direct access is provided to at least one protected stairway; or
    - 7.3. In buildings which are protected throughout by an approved automatic sprinkler system.
  8. In Group H Occupancies, the enclosure shall not be required for vertical openings not exceeding three stories where necessary for manufacturing operations and every floor level has direct access to at least two remote enclosed stairways or other approved exits.
  9. In Group M Occupancies, a minimum 30 minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 603.2.1, shall not be required under the following conditions:
    - 9.1. Openings connect only two floor levels; or
    - 9.2. Occupancies are protected throughout by an approved automatic sprinkler system.
  10. In Group R-1 Occupancies, the enclosure shall not be required for vertical openings not exceeding three stories where:
    - 10.1. In buildings which are protected throughout by an approved automatic sprinkler system; or
    - 10.2. In buildings with less than 25 guest rooms where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and where :
      - (1) Any exit access corridor exceeding eight feet (2438 mm) in length which serves two means of egress, one of which is an unprotected vertical opening, shall have at least one of the means of egress separated from the vertical opening by a one-hour fire barrier; and
      - (2) The building is protected throughout by an automatic fire alarm system, installed and supervised in accordance with the *International Building Code*.
  11. In Group R-2 Occupancies, a minimum 30 minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 603.2.1, shall not be required under the following conditions:
    - 11.1. Vertical openings not exceeding two stories with not more than four dwelling units per floor; or
    - 11.2. In buildings which are protected throughout by an approved automatic sprinkler system; or

11.3. In buildings with not more than four dwelling units per floor where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and The building is protected throughout by an automatic fire alarm system, complying with Section 604.4.

12. One-and two-family dwellings.

13. Group S Occupancies, where connecting more than two floor levels, or where connecting not more than three floor levels and the structure is equipped throughout with an approved automatic sprinkler system.

14. Group S Occupancies, vertical opening protection is not required for open parking garages and ramps.

**603.2.2 Supplemental shaft and floor opening enclosure requirements.** Where the work area on any floor exceeds 50 percent of that floor area, the enclosure requirements of Section 603.2 shall apply to vertical openings other than stairways throughout the floor:

**Exception:** Vertical openings located in tenant spaces that are entirely outside the work area.

**603.2.3 Supplemental stairway enclosure requirements.** Where the work area on any floor exceeds 50 percent of that floor area, stairways that are part of the means of egress serving the work area shall at a minimum be enclosed with smoke tight construction on the highest work area floor and all floors below.

**Exception:** Where stairway enclosure is not required by the *International Building Code* or the *International Fire Code*.

**603.3 Smoke barriers.** Smoke barriers in Group I-2 shall be installed where required by Sections 603.3.1 and 603.3.2.

**603.3.1 Compartmentation.** Where the work area is on a story used for sleeping rooms for more than 30 patients, the story shall be divided into not less than two compartments by smoke barrier walls complying with Section 603.3.2 such that each compartment does not exceed 22,500 square feet (2093 m<sup>2</sup>) and

the travel distance from any point to reach a door in the required smoke barrier shall not exceed 200 feet (60 960 mm).

**Exception:** Where neither the length nor width of the smoke compartment exceeds 150 feet (45 720 mm), the travel distance to reach the smoke barrier door shall not be limited.

**603.3.2 Fire-resistance rating.** The smoke barriers shall be fire resistance rated for 30 minutes and constructed in accordance with the *International Building Code*.

**603.4 Interior finish.** The interior finish of walls and ceilings in exits and corridors in any work area shall comply with the requirements of the *International Building Code*.

**Exception:** Existing interior finish materials which do not comply with the interior finish requirements of the *International Building Code* shall be permitted to be treated with an approved fire retardant coating in accordance with the manufacturer's instructions to achieve the required rating.

**603.4.1 Supplemental interior finish requirements.** Where the work area on any floor exceeds 50 percent of the floor area, Section 603.4 shall also apply to the interior finish in exits and corridors serving the work area throughout the floor.

**Exception:** Interior finish within tenant spaces that are entirely outside the work area.

**603.5 Guards.** The requirements of Sections 603.5.1 and 603.5.2 shall apply in all work areas.

**603.5.1 Minimum requirement.** Every portion of a floor, such as a balcony or a loading dock that is more than 30 inches (762 mm) above the floor or grade below and not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

**603.5.2 Design.** Where there are no guards or existing guards must be replaced, the guards shall be designed and installed in accordance with the *International Building Code*.

## **SECTION 604 FIRE PROTECTION**

**604.1 Scope.** The requirements of this section shall be limited to work areas in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located, or otherwise beyond the work area.

**604.2 Automatic sprinkler systems.** Automatic sprinkler systems shall be provided in accordance with the requirements of Sections 604.2.1 through 604.2.5. Installation requirements shall be in accordance with the *International Building Code*.

**604.2.1 High rise buildings.** In high rise buildings, work areas that include exits or corridors shared by more than one tenant or serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where the work area is located on a floor which has a sufficient existing sprinkler water supply system to the floor.

**604.2.1.1 Supplemental automatic sprinkler system requirements.** Where the work area on any floor exceeds 50 percent of that floor area, Section 604.2.2 shall apply to the entire floor on which the work area is located.

**Exception:** Tenant spaces that are entirely outside the work area.

**604.2.2 Groups A, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2.** In buildings with occupancies in Groups A, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2, work areas that include exits or corridors shared by more than one tenant or serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The work area would be required to be provided with automatic sprinkler protection in accordance with the *International Building Code* applicable to new construction;
2. The work area exceeds 50% of the floor area; and
3. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor.

**Exception:** Work areas in Group R Occupancies 3 stories or less in height.

**604.2.2.1 Mixed uses.** In work areas containing mixed uses, one or more of which requires automatic sprinkler protection in accordance with Section 604.2.2, such protection shall not be required throughout the work area provided that the uses requiring such protection are separated from those not requiring protection by fire resistive construction having a minimum two-hour rating for Use Group H, and a minimum one-hour rating for all other use groups.

**604.2.3 Windowless stories.** Work located in a windowless story as determined in accordance with

the *International Building Code* shall be sprinklered where the work area would be required to be sprinklered under the provisions of the *International Building Code* as a newly constructed building, and the building has sufficient municipal water supply available to the floor.

**604.2.4 Other required suppression systems** In buildings and areas listed in Table 903.2.15 of the *International Building Code*, work areas include exits or corridors shared by more than one tenant or serving an occupant load greater than 30 shall be provided with sprinkler protection where the following conditions occur:

1. The work area would be required to be provided with automatic sprinkler protection in accordance with the *International Building Code* applicable to new construction; and
2. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor.

**604.2.5 Supervision.** Fire sprinkler systems required by this Section shall be supervised by one of the following methods:

1. Approved central station system in accordance with NFPA 72;
2. Approved proprietary system in accordance with NFPA 72;
3. Approved remote station system of the jurisdiction in accordance with NFPA 72; or
4. Approved local alarm service which will cause the sounding of an alarm in accordance with NFPA 72.

**Exceptions:** Supervision is not required for the following :

1. Underground gate valve with roadway boxes;
2. Halogenated extinguishing systems;
3. Carbon dioxide extinguishing systems;
4. Dry and wet chemical extinguishing systems;
5. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.

**604.3 Standpipes.** Where the work area includes exits or corridors shared by more than one tenant and is located more than 50 feet (15240 mm) above or below the lowest level of fire department access, a standpipe system shall be provided. Standpipes shall have an approved fire department connection with hose connections at each floor level above or below the

lowest level of fire department access. Standpipe systems shall be installed in accordance with the *International Building Code*.

**Exceptions:**

1. No pump shall be required provided that the standpipes are capable of accepting delivery by fire department apparatus of a minimum of 250 gpm at 65 psi (946 L/m at 448KPa) to the topmost floor in buildings equipped throughout with an automatic sprinkler system or a minimum of 500 gpm at 65 psi (1892 L/m at 448KPa) to the topmost floor in all other buildings. Where the standpipe terminates below the topmost floor, the standpipe shall be designed to meet (gpm/psi) (L/m/KPa) requirements of this exception for possible future extension of the standpipe.
2. The interconnection of multiple standpipe risers shall not be required.

**604.4 Fire alarm and detection.** An approved fire alarm system shall be installed in accordance with Sections 604.4.1 through 604.4.1.9. Where automatic sprinkler protection is provided in accordance with Section 604.2 and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall be approved. The automatic fire detectors shall be smoke detectors, except an approved alternate type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector.

**604.4.1 Occupancy requirements.** A fire alarm system shall be installed in accordance with Sections 604.4.1.1 through 604.4.1.7. Existing alarm-notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the work area shall be provided and automatically activated.

**Exceptions:**

1. Occupancies with an existing, previously approved fire alarm system.
2. Where selective notification is permitted, alarm-notification appliances shall be automatically activated in the areas selected.

**604.4.1.1 Group E.** A fire alarm system shall be installed in work areas in Group E occupancies as required by the *International Fire Code* for existing Group E occupancies.

**604.4.1.2 Group I-1.** A fire alarm system shall be installed in work areas in Group I-1 residential care/assisted living facilities as required by the *International Fire Code* for existing Group I-1 occupancies.

**604.4.1.3 Group I-2.** A fire alarm system shall be installed in work areas in Group I-2 occupancies as required by the *International Fire Code* for existing Group I-2 occupancies.

**604.4.1.4 Group I-3.** A fire alarm system shall be installed in work areas Group I-3 occupancies as required by the *International Fire Code* for existing Group I-3 occupancies.

**604.4.1.5 Group R-1.** A fire alarm system shall be installed in Group R-1 occupancies as required by the *International Fire Code* for existing Group R-1 occupancies.

**604.4.1.6 Group R-2.** A fire alarm system shall be installed in work areas of Group R-2 apartment buildings as required by the *International Fire Code* for existing Group R-2 occupancies.

**604.4.1.7 Group R-4.** A fire alarm system shall be installed in work areas of Group R-4 residential care/assisted living facilities as required by the *International Fire Code* for existing Group R-4 occupancies.

**604.4.2 Supplemental fire alarm system requirements.** Where the work area on any floor exceeds 50 percent of that floor area, Section 604.4.1 shall apply throughout the floor.

**Exception:** Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the work area.

**604.4.3 Smoke Alarms.** Individual guestrooms and individual dwelling units in any work area in Group R-1, R-2, R-3, R-4 and I-1 shall be provided with smoke alarms in accordance with the *International Fire Code*.

**Exception:** Interconnection of smoke alarms outside of the rehabilitation work area shall not be required.

**SECTION 605  
MEANS OF EGRESS**

**605.1 Scope.** The requirements of this section shall be limited to work areas that include exits or corridors shared by more than one tenant within the work area in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located, or otherwise beyond the work area.

**605.2 General.** The means of egress shall comply with the requirements of this section.

**Exception:**

1. Where the work area and the means of egress serving it complies with NFPA 101.
2. Means of egress conforming to the requirements of the *International Building Code* under which the building was constructed shall be considered as complying means of egress if, in the opinion of the code official, they do not constitute a distinct hazard to life.

**605.3 Number of exits.** The number of exits shall be in accordance with Sections 605.3.1 through 605.3.3.

**605.3.1 Minimum number.** Every story utilized for human occupancy on which there is a work area that includes exits or corridors shared by more than one tenant within the work area shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the *International Building Code*. In addition, the exits shall comply with Sections 605.3.1.1 and 605.3.1.2.

**605.3.1.1 Single exit buildings.** Only one exit is required from buildings and spaces with the following occupancies:

1. In Group A, B, E, F, M, U, and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22 860 mm).
2. Group B, F-2, or S-2 occupancies not more than two stories in height, which are not greater than 3,000 square feet per floor (279 m<sup>2</sup>), when the exit access travel distance does not exceed 75 feet (22 860 mm). The minimum fire resistance rating of the exit enclosure and of the opening protection shall be one hour.
3. Open parking structures where vehicles are mechanically parked.

4. Groups R-1 and R-2, except that in community residences for the developmentally disabled, the maximum occupant load, excluding staff, is 12.
5. Groups R-1 and R-2, not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15 240 mm). The minimum fire resistance rating of the exit enclosure and of the opening protection shall be one hour.
6. In Multi-level dwelling units in buildings of Occupancy Classification R-1 or R-2, an exit shall not be required from every level of the dwelling unit provided that one of the following conditions is met:
  - 6.1. The travel distance within the dwelling unit does not exceed 75 feet (22 860 mm); or
  - 6.2. The building is not more than three stories in height and all third floor space is part of one or more dwelling units located in part on the second floor and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet (15 240 mm) from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.
7. In Group R-2, H-4, H-5 and I Occupancies and in rooming houses and child care centers, a single exit is permitted in a one story building with a maximum occupant load of 10 and the exit access travel distance does not exceed 75 feet (22 860 mm).
8. In buildings of Group R-2 Occupancy that are equipped throughout with an automatic fire sprinkler system, a single exit shall be permitted from a basement or story below grade if every dwelling unit on that floor is equipped with an approved window providing a clear opening of at least five square feet (0.47 m<sup>2</sup>) in area, a minimum net clear opening of 24 inches (610 mm) in height and 20 inches (508 mm) in width, and a sill height of not more than 44 inches (1118 mm) above the finished floor.
9. In buildings of Group R-2 Occupancy of any height with not more than four dwelling units per floor, with a smokeproof enclosure or outside stair as an exit, and with such exit within 20 feet (6096 mm) of



travel to the entrance doors to all dwelling units served thereby.

10. In buildings of Group R-3 Occupancy equipped throughout with an automatic fire sprinkler system, only one exit shall be required from basements or stories below grade.

**605.3.1.2 Fire escapes required.** When more than one exit is required, an existing or newly constructed fire escape complying with Section 605.3.1.2.1 shall be accepted as providing one of the required means of egress.

**605.3.1.2.1 Fire escape access and details.** Fire escapes shall comply with all of the following requirements:

1. Occupants shall have unobstructed access to the fire escape without having to pass through a room subject to locking.
2. Access to a new fire escape shall be through a door, except that windows shall be permitted to provide access from single dwelling units or guest rooms in Groups R-1, R-2 and I-I Occupancies or when providing access from spaces having a maximum occupant load of 10 in other occupancy classifications.
3. Newly constructed fire escapes shall be permitted only where exterior stairs cannot be utilized due to lot lines limiting stair size or due to the sidewalks, alleys, or roads at grade level.
4. Openings within 10 feet (3048 mm) of fire escape stairs shall be protected by fire assemblies having a minimum of  $\frac{3}{4}$ -hour fire-resistance ratings.

**Exception:** Buildings equipped throughout with an approved automatic sprinkler system, opening protection is not required.

5. In all buildings of Group E Occupancy, up to and including the 12th grade, buildings of Group I Occupancy, rooming houses and child care centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

**605.3.1.2.2 Construction.** The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved noncombustible materials. Fire escapes constructed of wood not less than nominal 2 inches (51 mm) thick are permitted on buildings of Type 5 construction. Walkways

and railings located over or supported by combustible roofs in buildings of Types 3 and 4 construction are permitted to be of wood not less than nominal 2 inches (51 mm) thick.

**605.3.1.2.3 Dimensions.** Stairs shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm) and landings at the foot of stairs not less than 40 inches (1016 mm) wide by 36 inches (914 mm) long, located not more than 8 inches (203 mm) below the door.

**605.3.2 Mezzanines.** Mezzanines in the work area and with an occupant load of more than 50 or in which the travel distance to an exit exceeds 75 feet (22 860 mm) shall have access to at least two independent means of egress.

**Exception:** Two independent means of egress are not required where the travel distance to an exit does not exceed 100 feet (30 480 mm) and the building is protected throughout with an automatic sprinkler system.

**605.3.3 Main entrance - Group A.** All buildings of Group A with an occupant load of 100 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity for at least one-half the total occupant load. The remaining exits shall be capable of providing one-half of the total required exit capacity.

**Exception:** Where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width.

**605.4 Egress doorways.** Egress doorways in any work area shall comply with Sections 605.4.1 through 605.4.5.

**605.4.1 Two egress doorways required.** Work areas shall be provided with two egress doorways in accordance with the requirements of Sections 605.4.1.1 and 605.4.1.2.

**605.4.1.1 Occupant load and travel distance.** In any work area, all rooms and spaces having an occupant load greater than 50 or in which the travel distance exceeds 75 feet (22 860 mm) shall have a minimum of two egress doorways.

**Exceptions:**

1. Storage rooms having a maximum occupant load of 10.

2. Where the work area is served by a single exit in accordance with Section 605.3.1.1.

**605.4.1.2 Group I-2.** In buildings of Group I-2 Occupancy, any patient sleeping room or suite of patient rooms greater than 1,000 square feet (93 m<sup>2</sup>) within the work area shall have a minimum of two egress doorways.

**605.4.2 Door swing.** In the work area and in the egress path from any work area to the exit discharge, all egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel. This provision shall apply to the entire floor where the work area exceeds 50 percent of the floor area.

**Exception:** Means of egress within a tenant space that is entirely outside the work area.

**605.4.3 Door closing.** In any work area, all doors opening onto an exit passageway at grade or exit stair shall be self-closing or automatically closing by listed closing devices. This provision shall apply throughout the exit stair from the work area floor to the level of exit discharge where the work area exceeds 50 percent of the floor area.

**Exceptions:**

1. Where exit enclosure is not required by the *International Building Code*.
2. Means of egress within a tenant space that is entirely outside the work area.

**605.4.4 Panic hardware.** In any work area, and in the egress path from any work area to the exit discharge, in buildings or portions thereof of Group A assembly occupancies with an occupant load greater than 100, all required exit doors equipped with latching devices shall be equipped with approved panic hardware. This provision shall apply to the entire floor where the work area exceeds 50% of the floor area.

**Exception:** Means of egress within a tenant space that is entirely outside the work area.

**605.4.5 Emergency power source in Group I-3.** Work areas in buildings of Group I- 3 Occupancy having remote power unlocking capability for more than 10 locks shall be provided with an emergency power source for such locks. Power shall be arranged to automatically operate upon failure of normal power within 10 seconds and for a duration of not less than one hour.

**605.5 Openings in corridor walls.** Openings in corridor walls in any work area shall comply with Sections 605.5.1 through 605.5.4.

**Exception:** Openings in corridors where such corridors are not required to be rated in accordance with the *International Building Code*.

**605.5.1 Corridor doors.** Corridor doors in the work area shall not be constructed of hollow core wood and shall not contain louvers. All dwelling units, guest room or rooming unit corridor doors in work areas in buildings of Groups R-1, R-2, and I-I shall be at least 1<sup>3</sup>/<sub>8</sub> inch (35 mm) solid core wood or approved equal with approved door closers and shall not have any glass panels, other than approved wired glass or other approved glazing material in metal frames. All replacement doors shall be 1<sup>3</sup>/<sub>4</sub> inch (45 mm) solid bonded wood core or approved equal, unless the existing frame will accommodate only a 1<sup>1</sup>/<sub>2</sub> inch (35 mm) door.

**Exceptions:**

1. Corridor doors within a dwelling unit or guestroom.
2. Existing doors meeting the requirements of *HUD Guideline on Fire Ratings of Archaic Materials and Assemblies* for a rating of 15 minutes or better shall be accepted as meeting the provisions of this requirement.
3. Existing doors in buildings protected throughout with an approved automatic sprinkler system shall be required only to resist smoke, be reasonably tight fitting and shall not contain louvers.
4. In group homes with a maximum of 15 occupants, and which are protected with an approved automatic detection system, closing devices may be omitted.
5. Door assemblies having a fire protection rating of at least 20 minutes.

**605.5.2 Transoms.** In all buildings of Group I- 1, R-1 and R-2 Occupancy all transoms in corridor walls in work areas shall be either glazed with 1/4-inch (6.4 mm) wired glass set in metal frames or other glazing assemblies having a fire protection rating as required for the door and permanently secured in the closed position or sealed with materials consistent with the corridor construction.

**605.5.3 Other corridor openings.** In any work area, any other sash, grill or opening in a corridor, and any window in a corridor not opening to the outside air, shall be sealed with materials consistent with the corridor construction. Where the work exceeds 50% of the floor area, this section shall be applicable to all

corridor windows, grills, sash and other openings on the floor.

**Exception:** Means of egress within a tenant space that is entirely outside the work area.

**605.5.4 Supplemental requirements for corridor openings.** Where the work area on any floor exceeds 50 percent of the floor area, the requirements of Sections 605.5.1 through 605.5.3 shall apply throughout the floor.

**605.6 Dead end corridors.** Dead end corridors in any work area shall not exceed 35 feet (10 670 mm).

**Exceptions:**

1. Where dead-end corridors of greater length are permitted by the *International Building Code*.
2. In other than Group A and H Occupancies, the maximum length of an existing dead end corridor shall be 50 feet (15 240 mm) in buildings equipped throughout with an automatic fire alarm system installed in accordance with the *International Building Code*.
3. In other than Group A and H Occupancies, the maximum length of an existing dead end corridor shall be 70 feet (21 356 mm) in buildings equipped throughout with an automatic sprinkler system installed in accordance with the *International Building Code*.
4. In other than Group A and H Occupancies the maximum length of an existing, newly constructed or extended dead end corridor shall not exceed 50 feet (15 240 mm) on floors equipped with an automatic sprinkler system installed in accordance with the *International Building Code*.

**605.7 Means of egress lighting.** Means of egress lighting shall be in accordance with this section, as applicable.

**605.7.1 Artificial lighting required.** Means of egress in all work areas shall be provided with artificial lighting in accordance with the requirements of the *International Building Code*.

**605.7.2 Supplemental requirements for means of egress lighting.** Where the work area on any floor exceeds 50 percent of that floor area, means of egress throughout the floor shall comply with Section 605.7.1.

**Exception:** Means of egress within a tenant space that is entirely outside the work area.

**605.8 Exit signs.** Exit signs shall be in accordance with this section, as applicable.

**605.8.1 Work areas.** Means of egress in all work areas shall be provided with exit signs in accordance with the requirements of the *International Building Code*.

**605.8.2 Supplemental requirements for exit signs.** Where the work area on any floor exceeds 50 percent of that floor area, means of egress throughout the floor shall comply with Section 605.8.1.

**Exception:** Means of egress within a tenant space that is entirely outside the work area.

**605.9 Handrails.** The requirements of Sections 605.9.1 and 605.9.2 shall apply to handrails from work area floor to the level of exit discharge.

**605.9.1 Minimum requirement.** Every required exit stairway that is part of the means of egress for any work area and that has three or more risers and is not provided with at least one handrail, or in which the existing handrails are judged to be in danger of collapsing, shall be provided with handrails for the full length of the run of steps on at least one side. All exit stairways with a required egress width of more than 66 inches shall have handrails on both sides.

**605.9.2 Design.** Handrails required in accordance with Section 605.9.1, shall be designed and installed in accordance with the provisions of the *International Building Code*.

**605.10 Guards.** The requirements of Sections 605.10.1 and 605.10.2 shall apply to guards from work area floor to the level of exit discharge, but shall be confined to the egress path of any work area.

**605.10.1 Minimum requirement.** Every open portion of a stair, landing, or balcony that is more than 30 inches (762 mm) above the floor or grade below and not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

**605.10.2 Design.** Guards required in accordance with Section 605.10.1 shall be designed and installed in accordance with the *International Building Code*.

## **SECTION 606 ACCESSIBILITY**

**606.1 General.** A building, facility or element that is altered shall comply with Section 506.

## **SECTION 607 STRUCTURAL**

**607.1 General.** Where alteration work includes installation of additional equipment that is structurally supported by the building or reconfiguration of space such that portions of the building become subjected to higher gravity loads as required by Tables 1607.1 and 1607.6 of the *International Building Code*, the provisions of this section shall apply.

**607.2 Reduction of strength.** Alterations shall not reduce the structural strength or stability of the building, structure or any individual member thereof.

**Exception:** Such reduction shall be allowed as long as the strength and the stability of the building are not reduced to below the *International Building Code* levels

**607.3 New structural members.** New structural members in alterations, including connections and anchorage, shall comply with the *International Building Code*.

**607.4 Existing structural members.** Existing structural components supporting additional equipment or subjected to additional loads based on *International Building Code* Tables 1607.1 and 1607.6 as a result of a reconfiguration of spaces shall comply with Sections 607.4.1 through 607.4.3.

**607.4.1 Gravity loads.** Existing structural elements supporting any additional gravity loads as a result of additional equipment or space reconfiguration shall comply with the *International Building Code*.

**Exceptions:**

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R Occupancy with not more than 5 dwelling units or guest rooms used solely for residential purposes where the existing building and its alteration comply with the Conventional Light-Frame Construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

**607.4.2 Lateral loads.** The seismic base shear shall not be increased by more than 5 percent. If it exceeds this limit, building shall comply with the requirements in Chapter 7.

**607.4.3 Snow drift loads.** Any structural element of an existing building subjected to additional loads from the effects of snow drift as a result of additional equipment shall comply with the *International Building Code*.

**Exceptions:**

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R Occupancy with no more than 5 dwelling units or guest rooms used solely for residential purposes where the existing building and its alteration comply with the Conventional Light-Frame Construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

## **SECTION 608 ELECTRICAL**

**608.1 New installations.** All newly-installed electrical equipment and wiring relating to work done in any work area shall comply with the materials and methods requirements of Chapter 5.

**Exception:** Electrical equipment and wiring in newly installed partitions and ceilings shall comply with all applicable requirements of the ICC Electrical Code.

**608.2 Existing installations.** Existing wiring in all work areas in Use Groups A-1, A-2, A-6, H, and I shall be upgraded to meet the materials and methods requirements of Chapter 5.

**608.3 Residential occupancies.** In Groups R-2, R-3, R-4 Occupancies and buildings regulated by the *International Residential Code*, the requirements of Sections 608.3.1 through 608.3.7 shall be applicable only to work areas located within a dwelling unit.

**608.3.1 Enclosed areas.** All enclosed areas, other than closets, kitchens, basements, garages, hallways, laundry areas, utility areas, storage areas and bathrooms shall have a minimum of two duplex receptacle outlets or one duplex receptacle outlet and one ceiling or wall type lighting outlet.

**608.3.2 Kitchens.** Kitchen areas shall have a minimum of two duplex receptacle outlets.

**608.3.3 Laundry areas.** Laundry areas shall have a minimum of one duplex receptacle outlet located near the laundry equipment and installed on an independent circuit.

**608.3.4 Ground fault circuit interruption.** Ground fault circuit interruption shall be provided on newly installed receptacle outlets if required by the Electrical Code.

**608.3.5 Minimum lighting outlets.** At least one lighting outlet shall be provided in every bathroom, hallway, stairway, attached garage and detached

garage with electric power, and to illuminate outdoor entrances and exits.

**608.3.6 Utility rooms and basements** At least one lighting outlet shall be provided in utility rooms and basements where these spaces are used for storage or contain equipment requiring service.

**608.3.7 Clearance for equipment.** Clearance for electrical service equipment shall be provided in accordance with the Electrical Code.

## **SECTION 609 MECHANICAL**

**609.1 Reconfigured or converted spaces.** All reconfigured spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area shall be provided with either natural or mechanical ventilation in accordance with the *International Mechanical Code*

**Exception:** Existing mechanical ventilation systems shall comply with the requirements of Section 609.2.

**609.2 Altered existing systems.** In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured or extended shall provide not less than 5 cubic feet per minute (cfm) (0.0024 m<sup>3</sup>/s) per person of outdoor air and not less than 15 cfm (0.0071 m<sup>3</sup>/s) of ventilation air per person; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62- 99.

**609.3 Local exhaust.** All newly-introduced devices, equipment or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms, and microbial contaminants in such quantities to adversely affect or impair health, or cause discomfort to occupants shall be provided with local exhaust.

## **SECTION 610 PLUMBING**

**610.1 Minimum fixtures.** Where the occupant load of the story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the *International Plumbing Code* based on the increased occupant load.



# CHAPTER 7

## ALTERATIONS - LEVEL 3

### SECTION 701 GENERAL

**701.1 Scope.** Alterations classified as Level 3 alterations as described in Section 305 shall comply with the requirements of this Chapter.

**701.2 Compliance.** In addition to the provisions of this chapter work shall comply with all the requirements of Chapters 5 and 6. The requirements of Sections 603, 604, and 605 shall apply within all work areas regardless of whether or not they include exits and corridors shared by more than one tenant and regardless of the occupant load.

#### Exceptions:

1. Buildings in which the reconfiguration of space affecting exits or shared egress access is exclusively the result of compliance with the accessibility requirements of Section 506.2 shall not be required to comply with this Chapter.
2. Existing dead end corridors may be extended and new dead end corridors may be added in accordance with Section 605.6.

### SECTION 702 SPECIAL USE AND OCCUPANCY

**702.1 High rise buildings** Any building having one or more floors more than 75 feet (22 860 mm) above the lowest level accessible to a fire department vehicle shall comply with the requirements of Sections 702.1.1 through 702.1.3.

**702.1.1 Re-circulating air or exhaust systems.** When a floor is served by a re-circulating air or exhaust system with a capacity greater than 15,000 cfm (701 m<sup>3</sup>/s), that system shall be equipped with approved smoke and heat detection devices installed in accordance with the *International Mechanical Code*.

**702.1.2 Elevators.** Where there is an elevator or elevators for use by the public, at least one elevator serving the work area shall comply with Section 607.1 of the *International Fire Code*.

**702.2 Boiler and Furnace equipment rooms** Boiler and furnace equipment rooms adjacent to or within the following facilities shall be enclosed by one-hour fire rated construction: day nurseries, children's shelter facilities, residential child care facilities and similar facilities with children below the age of 2-½ years, or

which are classified as Group I-2 Occupancy, shelter facilities, residences for the developmentally disabled, group homes, teaching family homes, transitional living homes, rooming and boarding houses, hotels and multiple dwellings.

#### Exceptions:

1. Furnace and boiler equipment of low pressure type, operating at pressures of 15 psig (103.4 KPa) or less for steam equipment or 170 psig (1171 KPa) or less for hot water equipment, when installed in accordance with manufacturer recommendations.
2. Furnace and boiler equipment of residential R-3 type with 200,000 BTU (211,000 KJ) per hour input rating or less is not required to be enclosed.
3. Furnace rooms protected with automatic sprinkler protection.

**702.2.1 Emergency controls.** Emergency controls for boilers and furnace equipment shall be provided in accordance with the *International Mechanical Code* in all buildings classified as day nurseries, children's shelter facilities, residential child care facilities and similar facilities with children below the age of 2-½ years, or which are classified as Group I-2 Occupancy, and in group homes, teaching family homes, and supervised transitional living homes in accordance with the following:

1. Emergency shutoff switches for furnaces and boilers in basements shall be located at the top of the stairs leading to the basement; and
2. Emergency shutoff switches for furnaces and boilers in other enclosed rooms shall be located outside of such room.

### SECTION 703 BUILDING ELEMENTS AND MATERIALS

**703.1 Existing shafts and vertical openings.** Existing stairways that are part of the means of egress shall be enclosed in accordance with Section 603.2.1 between highest work area floor and the level of exit discharge and all floors below.

**703.2 Fire partitions in Group R-3.** Fire separation in Group R-3 Occupancies shall be in accordance with Section 703.2.1.

**703.2.1 Separation required.** Where the work area is in any attached dwelling unit in Group R-3, or any multiple single family (Townhouse) constructed in accordance with the *International residential Code*,

walls separating the dwelling units which are not continuous from the foundation to the underside of the roof sheathing shall be constructed to provide a continuous fire separation using construction materials consistent with the existing wall or complying with the requirements for new structures. All work shall be performed on the side of the wall of the dwelling unit that is part of the work area.

**Exception:** Walls are not required to be continuous through concealed floor spaces.

**703.3 Interior finish.** Interior finish in exits serving the work area shall comply with Section 603.4 between the highest floor on which there is a work area to the floor of exit discharge.

## **SECTION 704 FIRE PROTECTION**

**704.1 Automatic sprinkler systems.** Automatic sprinkler systems in accordance with Section 604.2 shall be provided in all work areas.

**704.1.1 High rise buildings.** In high rise buildings, work areas shall be provided with automatic sprinkler protection where the building has a sufficient municipal water supply system to the site. Where the work area exceeds 50 percent of floor area, sprinklers shall be provided in the specified areas where sufficient municipal water supply for design and installation of a fire sprinkler system is available at the site.

**704.1.2 Rubbish and linen chutes.** Rubbish and linen chutes located in the work area shall be provided with sprinklered protection where protection of the rubbish and linen chute would be required under the provisions of the *International Building Code* for new construction, and the building has sufficient municipal water supply available to the site.

**704.2 Fire alarm and detection.** Fire alarm and detection systems complying with Sections 604.4.1 and 604.4.3 shall be provided throughout the building in accordance with the *International Building Code*.

**704.2.1 Manual fire alarm systems.** In Groups A, B, E, F, H, I, M, R-1 and R-2 Occupancies a manual fire alarm system shall be provided on all floors in the work area. Alarm notification appliances shall be provided on such floors and shall be automatically activated as required by the *International Building Code*.

### **Exceptions:**

1. Where the *International Building Code* does not require a manual fire alarm system.

2. Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the work area.

## **SECTION 705 MEANS OF EGRESS**

**705.1 General.** The means of egress shall comply with the requirements of Section 605 except as specifically required in Sections 705.2 and 705.3.

**705.2 Means of egress lighting.** Means of egress from the highest work area floor to the floor of exit discharge shall be provided with artificial lighting within the exit enclosure in accordance with the requirements of the *International Building Code*.

**705.3 Exit signs.** Means of egress from the highest work area floor to the floor of exit discharge shall be provided with exit signs in accordance with the requirements of the *International Building Code*.

## **SECTION 706 ACCESSIBILITY**

**706.1 General.** A building, facility or element that is altered shall comply with Section 506.

## **SECTION 707 STRUCTURAL**

**707.1 General.** Where buildings are undergoing Level 3 Alterations including structural alterations, the provisions of this section shall apply.

**707.2 Reduction of strength.** Alterations shall not reduce the structural strength or stability of the building, structure or any individual member thereof.

**Exception:** Such reduction shall be allowed provided that the structural strength and the stability of the building are not reduced to below the *International Building Code* levels.

**707.3 New structural members.** New structural members in alterations, including connections and anchorage, shall comply with the *International Building Code*.

**707.4 Minimum design loads.** The minimum design loads for the structure shall be the loads applicable at the time the building was constructed, provided that no overstressed condition is created.

**707.5 Structural alterations.** Buildings and structures undergoing structural alterations shall comply with this section.



**707.5.1 Evaluation and analysis.** An engineering evaluation and analysis which establishes the structural adequacy of the altered structure shall be prepared by a registered design professional and submitted to the code official where more than 30 percent, within a 12 months period, of the floor and roof areas of the building or structure have been or are proposed to be involved in structural alteration. The evaluation and analysis shall demonstrate that the building or the buildings' structural system once altered complies with the *International Building Code* for wind loading and with reduced *International Building Code* level seismic forces as specified in Section 407.1.1.3 for seismic loading. For seismic considerations the analysis shall be based upon one of the procedures specified in Section 407.1.1.1. The areas to be counted towards the 30 percent shall be those areas tributary to the vertical load carrying components such as joists, beams, columns, walls and other structural components that have been or will be removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and infilled courts and shafts.

**Exceptions:**

1. Buildings of Group R Occupancy with no more than 5 dwelling units or guest rooms used solely for residential purposes altered based on the Conventional Light-Frame Construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.
2. Where such alterations involve only the lowest story of a building and Change of Occupancy Provisions of Chapter 8 do not apply, only the lateral force resisting components in and below that story need comply with this Section.

**707.6 Additional vertical loads.** Where gravity loading is increased on the roof or floor of a building or structure, all structural members affected by such increase in loading shall meet the gravity load requirements of *International Building Code*.

**Exceptions:**

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R Occupancy with no more than 5 dwelling units or guest rooms used solely for residential purposes altered based on the Conventional Light-Frame Construction methods of the *International Building Code* or in compliance with the provisions of the *International Residential Code*.

**707.7 Voluntary lateral force resisting system alterations.** Alterations of existing structural elements that are initiated for the purpose of increasing the lateral-force-resisting strength or stiffness of an existing structure, and are not required by other sections of this code, shall not be required to be designed for forces conforming to the *International Building Code* provided that an engineering analysis is submitted to show that :

1. The capacity of existing structural elements required to resist forces is not reduced.
2. The lateral loading to existing structural elements is not increased beyond their capacity.
3. New structural elements are detailed and connected to the existing structural elements as required by the *International Building Code*.
4. New or relocated non-structural elements are detailed and connected to existing or new structural elements as required by the *International Building Code* and
5. A dangerous condition as defined in this code is not created.

Voluntary alterations to lateral force resisting systems conducted in accordance with Appendix A and the referenced standards of this code shall be permitted.



# CHAPTER 8

## CHANGE OF OCCUPANCY

### SECTION 801 GENERAL

**801.1 Repair and alteration with no change of occupancy classification.** Any repair or alteration work undertaken in connection with a change of occupancy that does not involve a change of occupancy classification as described in the *International building code* shall conform to the requirements of Chapters 4, 5, 6 and 7 respectively for the applicable occupancy group and the requirements of Sections 802 through 811.

#### Exceptions:

1. Compliance with all the provisions of Chapter 7 is not required where the change of occupancy classification complies with the requirements of Section 812.3.
2. As modified in Section 1004.0 for historic buildings.
3. As permitted in Chapter 12.

**801.2 Part change of occupancy group.** Where a portion of an existing building is changed to a new occupancy group, Section 812 shall apply.

**801.3 Certificate of occupancy required.** Every change of use to one classified in a different occupancy group shall require a new certificate of occupancy regardless of whether any repair or alteration work is required by these provisions.

### SECTION 802 SPECIAL USE AND OCCUPANCY

**802.1 Compliance with the building code.** Where the character of use of an existing building or part of an existing building is changed to one of the following special use or occupancy categories as defined in Chapter 4 of the *International Building Code*, the building shall comply with all the applicable requirements of the *International Building Code* regardless of whether a change of occupancy group is involved:

1. Covered mall buildings,
2. Atriums,
3. Motor vehicle related occupancies
4. Aircraft Related occupancies
5. Motion picture projection rooms,

6. Stages and platforms,
7. Special amusement buildings,
8. Specific use areas
9. Hazardous materials.

**802.2 Underground buildings.** An underground building in which there is a change of use shall comply with the requirements of the *International Building Code* applicable to underground structures.

### SECTION 803 BUILDING ELEMENTS AND MATERIALS

**803.1 General.** Building elements and materials in portions of buildings undergoing a change of occupancy classification shall comply with Section 812.

### SECTION 804 FIRE PROTECTION

**804.1 General.** Fire protection requirements of Section 812 shall apply where a building or portions thereof undergoes a change of occupancy classification.

### SECTION 805 EGRESS

**805.1 General.** Means of egress in portions of buildings undergoing a change of occupancy classification shall comply with Section 812.

### SECTION 806 ACCESSIBILITY

**806.1 General.** Accessibility in portions of buildings undergoing a change of occupancy classification shall comply with Section 812.

### SECTION 807 STRUCTURAL

**807.1 Gravity loads.** Buildings or portions thereof subject to a change of occupancy where such change in the nature of occupancy results in higher uniform or concentrated loads based on *International Building Code* Tables 1607.1 and 1607.6, shall comply with the gravity load provisions of the *International Building Code*.

**Exceptions:** Structural elements whose force stress is not increased by more than 5 percent.

**807.2 Snow and wind loads.** Buildings and structures subject to a change of occupancy where such change in the nature of occupancy results in higher wind or snow importance factors based on *International Building Code* Table 1604.5, shall be analyzed and shall comply with the applicable wind or snow load provisions of the *International Building Code*.

**Exception :** Where the new occupancy with higher importance factor is less than or equal to 10% of the total building floor area. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.

**807.3 Seismic loads.** Existing buildings with a change of occupancy shall comply with the seismic provisions of Sections 807.3.1 and 807.3.2.

**807.3.1 Compliance with the *International Building Code*.** When a building or portion thereof is subject to change of occupancy where such a change in the nature of the occupancy results in a higher Seismic Factor based on Table 1604.5 of the *International Building Code* or when a change of occupancy results in a building being reclassified to a higher Hazard Category as shown in Table 812.4.1, and for M occupancy being changed to A, E, I-1 R-1 ,R-2 or R-4 occupancies with two-thirds or more of the floors involved in Alteration-level 3 type of work, the building shall conform to the seismic requirements of the *International Building Code* for the new Seismic Use Group.

**Exceptions:**

1. Group M occupancies being changed to A, E, I-1, R-1, R-2 or R-4 occupancies for buildings less than six stories in height and in Seismic Design Category A, B and C.
2. Specific detailing provisions required for a new structure are not required to be met where it can be shown an acceptable level of performance and seismic safety is obtained for the applicable seismic use group using reduced *International Building Code* level seismic forces as specified in Section 407.1.1.3. : The rehabilitation procedures shall be approved by the code official and shall consider the regularity, over-strength, redundancy and ductility of the lateral load resisting system within the context of the existing detailing of the system.
3. Where the area of the new occupancy with higher Hazard Category is less than or equal to 10% of the total building floor area and the new occupancy is not classified as Seismic Use Group III. For the purposes of this

exception where a structure is occupied for two or more occupancies not included in the same seismic use group, the structure shall be assigned the classification of the highest seismic use group corresponding to the various occupancies. Where structures have two or more portions that are structurally separated in accordance with the *International Building Code* Section 1620, each portion shall be separately classified. Where a structurally separated portion of a structure provides required access to, required egress from, or shares life safety components with another portion having a higher seismic use group, both portions shall be assigned the higher seismic use group. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.

4. When the new occupancy with higher Hazard Category is within only one story of a building or structure, only the lateral force resisting elements in that story and all lateral force resisting elements below that story shall be required to comply with Section 807.3.1 and exception 2. The lateral forces generated by masses of such upper floors shall be included in the analysis and design of the lateral force resisting systems for the strengthened floor. Such forces may be applied to the floor level immediately above the topmost strengthened floor and distributed in that floor in a manner consistent with the construction and layout of the exempted floor.
5. Unreinforced masonry bearing wall buildings in Seismic Use Group 1 and in Seismic Use Group 1 and 2 when in Seismic Design Categories A, B and C shall be allowed to be strengthened to meet the requirements of Appendix A of the code (GSREB).

**807.3.2 Access of seismic use group III.** Where the change of occupancy is such that compliance with Section 807.3.1 is required and the Seismic Use Group is a Category III, the operational access to such a Seismic Use Group III existing structure shall not be through an adjacent structure.

**Exception:** Where the adjacent structure conforms to the requirements for Seismic Use Group III structures.

Where operational access is less than 10 feet (3048 mm) from an interior lot line or less than 10 feet (3048 mm) from another structure, access protection from potential falling debris shall be provided by the owner of the Seismic Use Group III structure.

## SECTION 808 ELECTRICAL

**808.1 Special occupancies.** Where the occupancy of an existing building or part of an existing building is changed to one of the following special occupancies as described in the ICC Electrical Code, the electrical wiring and equipment of the building or portion thereof that contains the proposed occupancy shall comply with an applicable requirements of the ICC Electrical Code regardless of whether a change of occupancy group is involved:

1. hazardous locations,
2. commercial garages, repair and storage,
3. aircraft hangars,
4. gasoline dispensing and service stations,
5. bulk storage plants,
6. spray application, dipping and coating processes,
7. health care facilities,
8. places of assembly,
9. theaters, audience areas of motion picture and television studios and similar locations,
10. motion picture and television studios and similar locations,
11. motion picture projectors, and
12. agricultural buildings.

**808.2 Unsafe conditions.** Where the occupancy of an existing building or part of an existing building is changed all unsafe conditions shall be corrected, without requiring that all parts of the electrical system be brought up to the current edition of the ICC Electrical Code.

**808.3 Service upgrade.** Where the occupancy of an existing building or part of an existing building is changed electrical service shall be upgraded to meet the requirements of the ICC Electrical Code for the new occupancy.

**808.4 Number of electrical outlets.** Where the occupancy of an existing building or part of an existing building is changed the number of electrical outlets shall comply with the ICC Electrical Code for the new occupancy.

## SECTION 809 MECHANICAL

**809.1 Mechanical requirements.** Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to different kitchen exhaust requirements or to increased mechanical ventilation requirements in accordance with the *International Mechanical Code*, the intent of the respective *International Mechanical Code* provisions shall be complied with.

## SECTION 810 PLUMBING

**810.1 Increased demand.** Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the *International Plumbing Code*, the intent of the respective *International Plumbing Code* provisions shall be complied with.

**810.2 Food handling occupancies.** If the new occupancy is a food handling establishment, all existing sanitary waste lines above the food or drink preparation or storage areas shall be panned or otherwise protected to prevent leaking pipes or condensation on pipes from contaminating food or drink. New drainage lines shall not be installed above such areas, and shall be protected in accordance with the *International Plumbing Code*.

**810.3 Interceptor required.** If the new occupancy will produce grease or oil laden wastes, interceptors shall be provided as required in the *International Plumbing Code*.

**810.4 Chemical wastes.** If the new occupancy will produce chemical wastes, the following shall apply:

1. If the existing piping is not compatible with the chemical waste, the waste shall be neutralized prior to entering the drainage system or the piping shall be changed to a compatible material.
2. No chemical waste shall discharge to a public sewer system without the approval of the sewage authority.

**810.5 Group I-2.** If the occupancy group is changed to Group I-2, the plumbing system shall comply with the applicable requirements of the *International Plumbing Code*.

## SECTION 811 OTHER REQUIREMENTS

### 811.1 Health and hygiene

**811.1.1 Light and ventilation.** Light and ventilation shall comply with the requirements of the *International Building Code* for the new occupancy

## SECTION 812

### CHANGE OF OCCUPANCY CLASSIFICATION

**812.1 Compliance with Chapter 7.** The occupancy classification of an existing building may be changed, provided the building meets all the requirements of Chapter 7 applied throughout the building for the new occupancy group, and complies with the requirements of Sections 802 through 812.

**812.1.1 Change of occupancy group without separation.** Where a portion of an existing building is changed to a new occupancy group, and that portion is not separated from the remainder of the building with fire barriers having a fire resistance rating as required in the *International Building Code* for the separate occupancy, the entire building shall comply with all of the requirements of Chapter 7 applied throughout the building for the most restrictive Use Group in the building and with the requirements of this Chapter.

**Exception:** Compliance with all the provisions of Chapter 7 is not required when the change of occupancy group complies with the requirements of Section 812.3.

**812.1.2 Change of occupancy group with separation.** A portion of an existing building that is changed to a new occupancy group, and is separated from the remainder of the building with fire barriers having a fire resistance rating as required in the *International Building Code* for the separate occupancy shall comply with all the requirements of Chapter 7 for the new occupancy group, and with the requirements of this Chapter.

**Exception:** Compliance with all the provisions of Chapter 7 is not required when the change of use complies with the requirements of Section 812.3.

**812.2 Hazard category classifications.** The relative degree of hazard between different occupancy groups shall be as set forth in the hazard category classifications, Tables A through C of Sections 812.4, 812.4.3 and 812.4.4.

**812.2.1 Change of occupancy classification to an equal or lesser hazard.** An existing building or portion thereof may have its use changed to a occupancy group within the same hazard classification category or to a occupancy group in a lesser hazard classification category (higher number) in all four hazard category classifications, provided it complies with the provisions of Chapter 7 for the new occupancy group, applied throughout the building, or portion thereof.

**Exception:** Compliance with all the provisions of Chapter 7 is not required where the change of occupancy group complies with the requirements of Section 812.3.

**812.2.2 Change of occupancy classification to a higher hazard.** An existing building shall comply with all the applicable requirements of this Chapter when a change in occupancy group will place it in a higher hazard category or when the occupancy group is changed within Group H.

**812.2.3 Change of occupancy classification to a higher hazard in all three hazard classifications.** An existing building may have its use changed to a higher hazard rating (lower number) in all three hazard category classifications designated in Tables A, B, and C provided it complies with this Chapter or with Chapter 12.

**812.3 Change of occupancy classification to an equal or lesser hazard in all three hazard classifications.** A change of use to an occupancy group within the same hazard classification category or to an occupancy group in a lesser hazard classification category (higher number) in the three hazard category classifications addressed by Tables A, B and C shall be permitted in an existing building or portion thereof provided the provisions of Sections 812.3.1 through 812.3.5 are met.

**812.3.1 Minimum requirements.** Regardless of the occupancy group involved, the following requirements shall be met:

1. The capacity of the means of egress shall comply with *International Building Code*.
2. The interior finish of walls and ceilings shall comply with the requirements of the *International Building Code* for the new occupancy group.

**812.3.2 Groups I-1, R-1, R-2, or R-4 .** Where the new use is classified as Group I-1, R-1 or R-2, or R-4 Occupancy the following requirements shall be met.

1. Corridor doors and transoms shall comply with the requirements of Sections 605.5.1 and 605.5.2.
2. Automatic sprinkler systems shall comply with the requirements of Section 604.2.
3. Fire alarm and detection systems shall comply with the requirements of Section 604.4.

**812.3.3 Group I-2.** Where the new use is classified as Group I-2 Occupancy, the following requirements shall be met:

1. Egress doorways from patient sleeping rooms shall and suites of rooms shall comply with the requirements of Section 605.4.1.2.
2. Shaft enclosures shall comply with the requirements of Section 703.1.
3. Smoke barriers shall comply with the requirements of Section 603.3.
4. Automatic sprinkler systems shall comply with the requirements of Section 604.2.
5. Fire alarm and detection systems shall comply with the requirements of Section 604.4.

**812.3.4 Group I-3.** Where the new use is classified as Group I-3 Occupancy, the following requirements shall be met:

1. Locking of egress doors shall comply with the requirements of Section 605.4.5.
2. Shaft enclosures shall comply with the requirements of Section 703.1.
3. Automatic sprinkler systems shall comply with the requirements of Section 604.2.
4. Fire alarm and detection systems shall comply with the requirements of Section 604.4.

**812.3.5 Group R-3.** Where the new use is classified as Group R-3 Occupancy, the following requirements shall be met:

1. Dwelling unit separation shall comply with the requirements of Section 703.2.1.
2. The smoke alarm requirements of Section 604.4.3 shall be met.

## 812.4 Fire and life safety

**812.4.1 Means of Egress, General.** Hazard categories in regard to life safety and means of egress shall be in accordance with Table 812.4.1.

**TABLE 812.4.1  
HAZARD CATEGORIES AND CLASSIFICATIONS:  
LIFE SAFETY AND EXITS**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATION
1 (Highest Hazard)	H
2	I-2, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1
5 (lowest hazard)	F-2, S-2, U

**812.4.1.1 Means of egress for change to higher hazard category.** When a change of occupancy group is made to a higher hazard category (lower

number) as shown in Table 812.4.1, the means of egress shall comply with the requirements of Chapter 10 of the *International Building Code*.

**Exceptions:**

1. Stairways shall be enclosed in compliance with applicable provisions of Section 703.1.
2. Existing stairways including handrails and guards complying with the requirements of Chapter 7 shall be permitted for continued use subject to approval of the code official.
3. Any stairway replacing an existing stairway within a space where, because of existing construction, the pitch or slope cannot be reduced, shall not be required to comply with the maximum riser height and minimum tread depth requirements.
4. Existing corridor walls constructed of wood lath and plaster in good condition or 1/2-inch-thick (12.7 mm) gypsum wallboard shall be permitted.
5. Existing corridor doorways, transoms and other corridor openings shall comply with the requirements in Sections 605.5.1, 605.5.2 and 605.5.3.
6. Existing dead end corridors shall comply with the requirements in Section 605.6.
7. An existing operable window with clear opening area no less than 4 square feet (0.38 m<sup>2</sup>), and with minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm) respectively shall be accepted as an emergency escape and rescue opening.

**812.4.1.2 Means of egress when change of use to equal or lower hazard category.** When a change of occupancy group is made to an equal or lesser hazard category as shown in Table 812.4.1, existing elements of the means of egress shall comply with the requirements of Section 705 for the new occupancy group. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the *International Building Code*.

**Exception:**

1. Any stairway replacing an existing stairway within a space where, because of existing construction, the pitch or slope cannot be reduced, shall not be required to comply with the maximum riser height and minimum tread depth requirements.
2. Compliance with Section 705 is not required where the change of occupancy group complies with the requirements of Section 812.3.

**812.4.1.3 Egress capacity.** Egress capacity shall meet or exceed the occupant load as specified in the *International Building Code* if the

change of Occupancy Classification is to an equal or lesser hazard category when evaluated in accordance with Table 812.4.1.

**812.4.1.4 Handrails.** Existing stairways shall comply with the handrail requirements in Section 605.9 in the area of the change of occupancy Classification.

**812.4.1.5 Guards.** Existing guards shall comply with the guardrail requirements in Section 605.10 within the area of the change of occupancy classification.

**812.4.2 Enclosure of vertical shafts.** Enclosure of vertical shafts shall be in accordance with Section 802.4.2.1 through 802.4.2.4.

**812.4.2.1 Minimum requirements.** Vertical shafts shall be designed to meet the *International Building Code* requirements for atriums or the requirements of this Section.

**812.4.2.2 Stairways.** When a change of occupancy group is made to a higher hazard category as shown in Table 812.4.1, interior stairways shall be enclosed as required by the *International Building Code*.

**Exceptions:**

1. In other than Group I Occupancy, an enclosure shall not be required for openings serving only one adjacent floor and not connected with corridors or stairways serving other floors.
2. Unenclosed existing stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by one-hour fire-resistive construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and occupant space shall have at least one sprinkler head above the openings of the tenant side. The sprinkler system shall be permitted to be supplied from the domestic water-supply systems, provided the system is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements.
3. Existing penetrations of stairway enclosures shall be accepted if they are protected in accordance with the *International Building Code*.

**812.4.2.3 Other vertical shafts.** Interior vertical shafts other than stairways, including but not limited to elevator hoistways and service and



utility shafts, shall be enclosed as required by the *International Building Code* when there is a change of use to a higher hazard category in Table 812.4.1.

**Exceptions:**

1. Existing one-hour interior shaft enclosures shall be accepted where a higher rating is required.
2. Vertical openings, other than stairways, in buildings other than Group I Occupancy and connecting less than 6 stories in height shall not be required to be enclosed if the entire building is provided with an approved automatic sprinkler system.

**812.4.2.4 Openings.** All openings into existing vertical shaft enclosures shall be protected by fire assemblies having a fire-protection rating of not less than one hour and shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector. All other openings shall be fire protected in an approved manner. Existing fusible link-type automatic door-closing devices shall be permitted in all shafts except stairways if the fusible link rating does not exceed 135°F. (57°C.).

**812.4.3 Heights and areas.** Hazard categories in regard to height and area shall be in accordance with Table 812.4.3.

**TABLE 812.4.3  
HAZARD CATEGORIES AND CLASSIFICATIONS:  
HEIGHTS AND AREAS**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	A-1, A-2, A-3, A-4, I, R-1, R-2, R-3, R-4
3	E, F-1, S-1, M
4 (Lowest Hazard)	B, F-2, S-2, A-5, R-3, U

**812.4.3.1 Height and area for change to higher hazard category.** When a change of occupancy group is made to a higher hazard category as shown in Table 812.4.3, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *International Building Code* for the new occupancy group.

**Exception:** A 1-story building changed into Group E shall not be required to meet the area limitations of the *International Building Code*.

**812.4.3.2 Height and area for change to equal or lesser hazard category.** When a change of use is made to an equal or lesser hazard category as shown in Table 812.4.3, the height and area of the existing building shall be deemed to be acceptable.

**812.4.3.3 Fire barriers .** When a change of occupancy group is made to a higher hazard category as shown in Table 812.4.3, fire barriers in separated mixed use buildings shall comply with the fire resistance requirements in the *International Building Code*.

**Exception:** Where the fire barriers are required to have a one-hour fire resistance rating, existing wood lath and plaster in good condition or existing ½-inch-thick (12.7 mm) gypsum wallboard shall be permitted.

**812.4.4 Exterior wall fire resistance ratings.** Hazard categories in regard to fire resistance ratings of exterior walls shall be in accordance with Table 812.4.4.

**TABLE 812.4.4  
HAZARD CATEGORIES AND CLASSIFICATIONS:  
EXPOSURE OF EXTERIOR WALLS**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATION
1 (Highest Hazard)	H
2	F-1, M, S-1
3	A, B, E, I, R
4 (Lowest Hazard)	F-2, S-2, U

**812.4.4.1 Exterior wall rating for change of occupancy classification to a higher hazard category.** Where a change of occupancy group is made to a higher hazard category as shown in Table 812.4.4, exterior walls shall have fire resistance and exterior opening protectives as required by the *International Building Code*. This provision shall not apply to walls at right angles to the property line.

**Exception:** A two hour fire resistance rating shall be allowed where the building does not exceed three stories in height and is classified as one of the following Groups: A-2 and A-3 with an occupant load of less than 300, B, F, M, or S.

**812.4.4.2 Exterior wall rating for change of occupancy classification to an equal or lesser hazard category.** When a change of occupancy group is made to an equal or lesser hazard category as shown in Table 812.4.4, existing exterior walls, including openings, shall be accepted.

**812.4.4.3 Opening protectives.** Openings in exterior walls shall be protected as required by the

*International Building Code*. When openings in the exterior walls are required to be protected due to distance from the property line, the sum of the area of such openings shall not exceed 50 percent of the total area of the wall in each story.

**Exceptions:**

1. Where the *International Building Code* permits openings in excess of 50 percent.
2. Protected openings shall not be required in buildings of occupancy group R which do not exceed three stories in height and which are located not less than 3 feet (914 mm) from the property line.
3. Where exterior opening protectives are required, an automatic sprinkler system throughout may be substituted for opening protection.
4. Exterior opening protectives are not required when the change of occupancy group is to an equal or lower hazard classification in accordance with Table 812.4.4.

**812.5 Accessibility.** Existing buildings or portions thereof that undergo a change of occupancy classification shall have all of the following accessible features:

1. At least one accessible building entrance.
2. At least one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1109 of the *International Building Code*.
4. Accessible parking, where parking is being provided.
5. At least one accessible passenger loading zone, where loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible. Change of group or occupancy that incorporate any alterations or additions shall comply with this section and Sections 506.1 and 506.2 as applicable.

**Exception:** Type B dwelling units required by Section 1107.5.4 of the *International Building Code* are not

required to be provided in existing buildings and facilities.

## **812. 6 Structural safety**

**812.6.1 Seismic loads.** Existing buildings with a change of Occupancy Classification shall comply with the seismic provisions of Section 807.3



# CHAPTER 9 ADDITIONS

## SECTION 901 GENERAL

**901.1 Scope.** An addition to a building or structure shall comply with the building, plumbing, electrical, and mechanical codes, without requiring the existing building or structure to comply with any requirements of those codes or of these provisions.

**Exception:** In flood hazard areas, the existing building is subject to the requirements of Section 903.5 of this Chapter.

**901.2 Creation of nonconformity.** An addition shall not create or extend any non-conformity in the existing building to which the addition is constructed with regard to accessibility, structural strength, fire safety, means of egress, or the capacity of mechanical, plumbing or electrical systems.

**901.3 Other work.** Any repair or alteration work within an existing building to which an addition is being made shall comply with the requirements of Chapters 3, 4, 5, 6, 7 and 8 respectively of these provisions.

## SECTION 902 HEIGHTS AND AREAS

**902.1 Height limitations.** No addition shall increase the height of an existing building beyond that permitted under the applicable provisions of Chapter 5 of the *International Building Code* for new buildings.

**902.2 Area limitations.** No addition shall increase the area of an existing building beyond that permitted under the applicable provisions of Chapter 5 of the *International Building Code* for new buildings unless fire separation as required in the *International Building Code* is provided.

### Exceptions:

1. Existing one and two story buildings shall be permitted to be expanded beyond what is permitted by up to 25 percent of the existing floor area, not to exceed an area of 125 percent of that permitted by the *International Building Code*, without providing fire separation.
2. Infilling of floor openings, non-occupiable appendages such as elevator and exit stair shafts, and the addition of mezzanines and equipment penthouses shall be permitted beyond that permitted by the *International Building Code*.

**902.3 Fire protection systems.** Existing fire areas increased by the addition shall comply with Chapter 9 of the *International Building Code*.

## SECTION 903 STRUCTURAL

**903.1 Compliance with *International Building Code*.** Additions to existing buildings or structures are new construction and shall comply with the *International Building Code*.

**903.2 Additional gravity loads.** Existing structural elements supporting any additional gravity loads as a result of additions shall comply with the *International Building Code*.

### Exceptions :

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R Occupancy with no more than 5 dwelling units or guestrooms used solely for residential purposes where the existing building and the addition comply with the Conventional Light-Frame Construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

**903.3 Lateral force resisting system.** The lateral force resisting system of existing buildings to which additions are made shall comply with Sections 903.3.1, 903.3.2 and 903.3.3.

### Exceptions:

1. In Type V construction, Group R Occupancies where the lateral force story shear in any story is not increased by more than 10 percent.
2. Buildings of Group R Occupancy with no more than 5 dwelling units or guestrooms used solely for residential purposes where the existing building and the addition comply with the Conventional Light-Frame Construction methods of the *International Building Code* or the provisions of the *International Residential Code*.
3. Additions where the lateral force story shear in any story is not increased by more than 5 percent.

**903.3.1 Vertical addition.** Any element of the Lateral Force Resisting System of an existing building subjected to an increase in vertical or lateral loads

from the vertical addition shall comply with the lateral load provisions of the *International Building Code*.

**903.3.2 Horizontal addition.** Where horizontal additions are structurally connected to an existing structure all lateral force resisting elements of the existing structure affected by such addition shall comply with the lateral load provisions of the *International Building Code*. Lateral loads imposed on the elements of the existing structure and the addition shall be determined by a relative stiffness analysis of the combined structure including torsional effects.

**903.3.3 Voluntary addition of structural elements to improve lateral force resisting system.** Voluntary addition of structural elements to improve the lateral force resisting system of a building shall comply with Section 707.7.

**903.4 Snow drift loads.** Any structural element of an existing building subjected to additional loads from the effects of snow drift as a result of an addition shall comply with the *International Building Code*.

**Exceptions :**

1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R Occupancy with no more than 5 dwelling units or guest rooms used solely for residential purposes where the existing building and the addition comply with the Conventional Light-Frame Construction methods of the *International Building Code* or the provisions of the *International Residential Code*.

**903.5 Flood hazard areas.** In flood hazard areas:

1. For horizontal additions that are structurally interconnected to the existing building:
  - 1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with *International Building Code* Section 1612.
  - 1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with *International Building Code* Section 1612.
2. For horizontal additions that are not structurally interconnected to the existing building:
  - 2.1. The addition shall comply with *International Building Code* Section 1612.
  - 2.2. If the addition and all other proposed work, when combined, constitute substantial

improvement, the existing building and the addition shall comply with *International Building Code* Section 1612.

3. For vertical additions and all other proposed work, when combined, that constitute substantial improvement, the existing building shall comply with *International Building Code* Section 1612.
4. For a new, replacement, raised or extended foundation, if the foundation work and all other proposed work, when combined, constitute substantial improvement, the existing building shall comply with *International Building Code* Section 1612.

## **SECTION 904 SMOKE ALARMS IN USE GROUPS R-3 AND R-4**

**904.1 Smoke alarms in addition.** Whenever an addition is made to a building or structure of Use Group R-3 or R-4, hardwired, interconnected smoke alarms meeting the requirements of the *International Building Code* or *International Residential Code* as applicable shall be installed and maintained in the addition.

**904.2 Smoke alarms in existing portions of building.** Whenever an addition is made to a building or structure of Use Group R-3 or R-4, the existing building shall be provided with smoke alarms as required by the *International Building Code* or the *International Residential Code* as applicable. The smoke alarms are not required to be interconnected.

## **SECTION 905 ACCESSIBILITY**

**905.1 Minimum requirements.** Accessibility provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of primary function, shall comply with the requirements in Section 506.2 for accessible routes.

## **SECTION 906 ENERGY CONSERVATION**

**906.1 Minimum requirements.** Additions to existing buildings or structures may be made to such buildings or structures without making the entire building or structure comply with the requirements of the *International Energy Conservation Code*. The addition shall conform to the requirements of the *International Energy Conservation Code* as they relate to new construction only.

# CHAPTER 10

## HISTORIC BUILDINGS

### SECTION 1001 GENERAL

**1001.1 Scope.** It is the intent of this chapter to provide means for the preservation of historic buildings. Historical buildings shall comply with the provisions of this chapter relating to their repair, alteration, relocation and change of occupancy.

**1001.2 Report.** A historic building undergoing repair, alteration, or change of occupancy shall be investigated and evaluated. If it is intended that the building meet the requirements of this chapter, a written report shall be prepared and filed with the code official by a registered design professional when in the opinion of the official, such a report is necessary. Such report shall be in accordance with Chapter 1 and shall identify each required safety feature in compliance with this chapter and where compliance with other chapters of these provisions would be damaging to the contributing historic features. In high seismic zones, a structural evaluation, describing, as a minimum, a complete load path and other earthquake-resistant features shall be prepared. In addition, the report shall describe each feature not in compliance with these provisions and demonstrate how the intent of these provisions is complied with in providing an equivalent level of safety.

**1001.3 Special occupancy exceptions - museums.** When a building that is in Use Group R-3 is also used for Group A, B or M purposes such as museum tours, exhibits and other public assembly activities, or for museums less than 3000 s.f. (279 m<sup>2</sup>) the code official may make a determination that the Use Group is B when life-safety conditions can be demonstrated in accordance with Section 1001.2. Adequate means of egress in such buildings, which may include a means of maintaining doors in an open position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, and/or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

**1001.4 Flood hazard areas.** In flood hazard areas:

1. If a historic building will continue to be listed or eligible for listing as a historic building, then work proposed to be undertaken is not considered to be a substantial improvement.
2. If all work proposed constitutes substantial improvement, including repairs, work required due to a change of occupancy, and alterations, then the existing building shall comply with *International Building Code* Section 1612.

### SECTION 1002 REPAIRS

**1002.1 Requirements.** Repairs to any portion of a historic building or structure shall be permitted with original or like materials and original methods of construction, subject to the provisions of this chapter.

**1002.2 Dangerous buildings.** When a historic building is determined to be dangerous no work shall be required except as necessary to correct identified unsafe conditions.

**1002.3 Relocated buildings.** Foundations of relocated historic buildings and structures shall comply with the *International Building Code*. Relocated historic buildings shall otherwise be considered a historic building for the purposes of this code. Relocated historic buildings and structures shall be so sited that exterior wall and opening requirements comply with the *International Building Code* or the compliance alternatives of this code.

**1002.4 Repairs and alterations, general.** Historic buildings undergoing repairs or alterations shall comply with all of the applicable requirements of Chapter 4 except as specifically permitted in this chapter.

**1002.5 Replacement.** Replacement of existing or missing features using original materials shall be permitted. Partial replacement for repairs that match the original in configuration, height and size shall be permitted. Such replacements shall not be required to meet the materials and methods requirements in Section 401.2.

**Exception:** Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Chapter 24 of the *International Building Code*.

### SECTION 1003 FIRE SAFETY

**1003.1 General.** Every historic building that does not conform to the construction requirements specified in this code for the occupancy or use and that constitutes a distinct fire hazard as defined herein shall be provided with an approved automatic fire-extinguishing system as determined appropriate by the code official. However, an automatic fire-extinguishing system shall not be used to substitute for, or act as an alternate to, the required number of exits from any facility.

**1003.2 Means of egress.** Existing door openings and corridor and stairway widths of less than that specified elsewhere in this code may be approved, provided that in the opinion of the code official there is sufficient width and height for a person to pass through the opening or traverse the means of egress. When approved by the code official, the front or main exit doors need not swing in the direction of the path of exit travel, provided other approved means of egress having sufficient capacity to serve the total occupant load are provided.

**1003.3 Transoms.** In fully sprinklered buildings of Groups R-1, R-2 or R-3 Occupancy existing transoms in corridors and other fire-rated walls may be maintained if fixed in the closed position. A sprinkler shall be installed on each side of the transom.

**1003.4 Interior finishes.** The existing finishes of walls and ceilings shall be accepted when it is demonstrated that they are the historic finishes.

**1003.5 Stairway enclosure.** In buildings of three stories or less, exit enclosure construction shall limit the spread of smoke by the use of tight-fitting doors and solid elements. Such elements are not required to have a fire rating.

**1003.6 One-hour fire resistant assemblies.** Where one-hour fire-resistive construction is required by these provisions, it need not be provided regardless of construction or occupancy when the existing wall and ceiling finish is wood or metal lath and plaster.

**1003.7 Glazing in fire-rated systems.** Historic glazing materials in interior walls required to have one-hour fire rating may be permitted when provided with approved smoke seals and when the area affected is provided with an automatic sprinkler system.

**1003.8 Stairway railings.** Grand stairways shall be accepted without complying with the handrail and guardrail requirements. Existing handrails and guards at all stairs shall be permitted to remain, provided they are not structurally dangerous.

**1003.9 Guards.** Guards shall comply with Sections 1003.9.1 and 1003.9.2.

**1003.9.1 Height.** Existing guards shall comply with the requirements of Section 405.

**1003.9.2 Guard openings.** The spacing between existing intermediate railings or openings in existing ornamental patterns shall be accepted. Missing elements or members of a guard may be replaced in a manner that will preserve the historic appearance of the building or structure.

**1003.10 Exit signs.** Where exit sign or egress path marking location would damage the historic character of the building, alternate exit signs are permitted with approval of the code official. Alternative signs shall identify the exits and egress path.

#### **1003.11 Automatic fire-extinguishing systems.**

**1003.11.1** Every historical building which cannot be made to conform to the construction requirements specified in the *International Building Code* for the occupancy or use, and which constitutes a distinct fire hazard shall be deemed to be in compliance if provided with an approved automatic fire extinguishing system.

**Exception:** When an alternative life-safety system is approved by the code official.

**1003.11.2** An automatic fire extinguishing system shall not be used to substitute for or act as an alternative to the required number of exits from any facility.

### **SECTION 1004 CHANGE OF OCCUPANCY**

**1004.1 General.** Historic buildings undergoing a change of occupancy shall comply with the applicable provisions of Chapter 3, except as specifically permitted in this chapter. When Chapter 3 requires compliance with specific requirements of Chapter 4, Chapter 5, or Chapter 6 and when those requirements are subject to the exceptions in Section 1002, the same exceptions shall apply in this section.

**1004.2 Building area.** The allowable floor area for historic buildings undergoing a change of occupancy shall be permitted to exceed the allowable areas specified in Chapter 5 of the *International Building Code* by 20 percent.

**1004.3 Location on property.** Historic structures undergoing a change of use to a higher hazard category, in accordance with Section 812.4.4 may use alternative methods to comply with the fire-resistance and exterior opening protective requirements. Such alternatives shall comply with Section 1001.2.

**1004.4** Required occupancy separations of one-hour may be omitted when the building is provided with an approved automatic sprinkler system throughout.

**1004.5 Roof covering.** Regardless of occupancy or Use Group, roof-covering materials not less than Class C shall be permitted where a fire-retardant roof covering is required.



**1004.6 Means of egress.** Existing door openings and corridor and stairway widths less than those that would be acceptable for nonhistoric buildings under these provisions shall be approved, provided that in the opinion of the code official, there is sufficient width and height for a person to pass through the opening or traverse the exit and that the capacity of the exit system is adequate for the occupant load, or where other operational controls to limit occupancy are approved by the code official.

**1004.7 Door swing.** When approved by the code official, existing front doors need not swing in the direction of exit travel, provided other approved exits having sufficient capacity to serve the total occupant load are provided.

**1004.8 Transoms.** In corridor walls required to be fire rated by these provisions, existing transoms may be maintained if fixed in the closed position and fixed wired glass set in a steel frame or other approved glazing shall be installed on one side of the transom.

**Exception:** Transoms conforming to Section 1003.4 shall be accepted.

**1004.9 Finishes.** Where finish materials are required to have a flame-spread classification of Class III or better, existing nonconforming materials shall be surfaced with an approved fire-retardant paint or finish.

**Exception:** Existing nonconforming materials need not be surfaced with an approved fire-retardant paint or finish when the building is equipped throughout with an automatic fire-suppression system installed in accordance with the *International Building Code* and the nonconforming materials can be substantiated as being historic in character.

**1004.10 One-hour fire resistant assemblies.** Where one-hour fire resistant construction is required by these provisions, it need not be provided regardless of construction or occupancy where the existing wall and ceiling finish is wood lath and plaster.

**1004.11 Stairs and railing.** Existing stairways shall comply with the requirements of these provisions. The code official shall grant alternatives for stairways and railings if alternative stairways are found to be acceptable or if judged as meeting the intent of these provisions. Existing stairways shall comply with Section 1003.

**Exception:** For buildings less than 3000 s.f. (279 m<sup>2</sup>), existing conditions permitted to remain at all stairs and rails.

**1004.12 Exit signs.** The code official may accept alternate exit sign locations where such signs would damage the historic character of the building or structure. Such signs shall identify the exits and exit path.

**1004.13 Exit stair live load.** Existing historic stairways in buildings changed to Use Groups R-1 and R-2 shall be accepted where it can be shown that the stairway can support a 75 pounds per square foot (366 kg/m<sup>2</sup>) live load.

**1004.14 Natural light.** When it is determined by the code official that compliance with the natural light requirements of Section 811.1.1 will lead to loss of historic character or historic materials in the building, the existing level of natural lighting shall be considered acceptable.

**1004.15 Accessibility requirements.** The provisions of Section 812.5 shall apply to buildings and facilities designated as historic structures that undergo a change of occupancy, unless technically infeasible. Where compliance with the requirements for accessible routes, ramps, entrances, or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the authority having jurisdiction, the alternative requirements of Sections 1005.1.1 through 1005.1.5 of the *International Building Code* for that element shall be permitted.

## SECTION 1005 ALTERATIONS

**1005.1 Accessibility requirements.** The provisions of Section 506 shall apply to buildings and facilities designated as historic structures that undergo alterations, unless technically infeasible. Where compliance with the requirements for accessible routes, ramps, entrances, or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the code official, the alternative requirements of Sections 1005.1.1 through 1005.1.5 of this code for that element shall be permitted.

**1005.1.1 Site arrival points.** At least one main entrance shall be accessible.

**1005.1.2 Multilevel buildings and facilities.** An accessible route from an accessible entrance to public spaces on the level of the accessible entrance shall be provided.

**1005.1.3 Entrances.** At least one main entrance shall be accessible.

**Exception:** If a main entrance cannot be made accessible, an employee or service entrance that is unlocked while the building is occupied shall be made accessible.

**1005.1.4 Toilet and bathing facilities.** Where toilet rooms are provided at least one accessible toilet room complying with Section 1108.2.1 of the *International Building Code* shall be provided.

**1005.1.5 Ramps.** The slope of a ramp run of 24 inches (610 mm) maximum shall not be steeper than one unit vertical eight units horizontal (12-percent slope).

## **SECTION 1006 STRUCTURAL**

**1006.1 General.** Historic Buildings shall comply with the structural provisions of this code.

**Exception :** The code official shall be authorized to accept existing floors and approve operational controls that limit the live load on any such floor.

**1006.2 Unsafe structural elements.** Where determination is made by the code official that a component or a portion of a building or structure is dangerous, as defined in this code, and is in need of repair, strengthening or replacement by provisions of this code, only that specific component or portion shall be required to be repaired, strengthened or replaced.

# CHAPTER 11

## RELOCATED OR MOVED BUILDINGS

### SECTION 1101 GENERAL

**1101.1 Scope.** This chapter provides requirements for relocated or moved structures.

**1101.2 Conformance.** The building shall be safe for human occupancy as determined by the International Fire Code and the *International Property Maintenance Code*. Any repair, alteration or change in occupancy undertaken within the moved structure shall comply with the requirements of this code applicable to the work being performed. Any field fabricated elements shall comply with the requirements of the *International Building Code*.

### SECTION 1102 REQUIREMENTS

**1102.1 Location on the lot.** The building shall be located on the lot in accordance with the requirements of the *International Building Code* or the *International Residential Code* as applicable.

**1102.2 Foundation.** The foundation system of relocated buildings shall comply with the *International Building Code*.

**1102.2.1 Connection to the foundation.** The connection of the relocated building to the foundation shall comply with the *International Building Code*.

**1102.3 Wind Loads.** Building shall comply with *International Building Code* wind provisions.

#### Exceptions:

1. Detached one and two family dwellings and Group U Occupancies where wind loads at the new location are not higher than the previous location.
2. Structural elements whose stress is not increased by more than 5 percent.

**1102.4 Seismic loads.** Building shall comply with *International Building Code* seismic provisions at the new location.

#### Exceptions:

1. All structures in Seismic Design Categories A and B, and detached one and two family dwellings in Seismic Design Categories A, B and C where the

seismic loads at the new location are not higher than the previous location.

2. Structural elements whose stress is not increased by more than 5 percent.

**1102.5 Snow loads.** Structure shall comply with *International Building Code* snow loads where snow loads at the new location are higher than the previous location.

**Exception:** Structural elements whose stress is not increased by more than 5 percent.

**1102.6 Flood hazard areas.** If relocated or moved into a flood hazard area, structures shall comply with *International Building Code* Section 1612.

**1102.7 Required inspection and repairs.** The code official shall be authorized to inspect, or require inspection by approved professionals at the expense of the owner, the various structural parts of a relocated building to verify that structural components and connections have not sustained structural damage. Any repairs required by the code official as a result of such inspection shall be made prior to the final approval.



# CHAPTER 12

## COMPLIANCE ALTERNATIVES

### SECTION 1201 GENERAL

**1201.1 Scope.** The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in existing buildings while permitting repair, alteration, addition and change of occupancy without requiring full compliance with Chapters 4 through 10, except where compliance with other provisions of this code is specifically required in this Chapter.

**1201.2 Applicability.** Structures existing prior to [DATE TO BE INSERTED BY THE JURISDICTION]. Note: it is recommended that this date coincide with the effective date of building codes within the jurisdiction, in which there is work involving additions, alterations or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 4 through 10. The provisions in Sections 1201.2.1 through 1201.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, and S. These provisions shall not apply to buildings with occupancies in Group H or I.

**1201.2.1 Change in occupancy.** Where an existing building is changed to a new occupancy classification and this section is applicable, the provisions of this section for the new occupancy shall be used to determine compliance with this code.

**1201.2.2 Part change in occupancy.** Where a portion of the building is changed to a new occupancy classification, and that portion is separated from the remainder of the building with fire barrier walls assemblies having a fire resistance rating as required by Table 302.3.3 of the *International Building Code* or Section R321 of the *International Residential Code* for the separate occupancies, or with approved compliance alternatives, the portion changed shall be made to conform to the provisions of this section. Where a portion of the building is changed to a new occupancy classification, and that portion is not separated from the remainder of the building with fire separation assemblies having a fire resistance rating as required by Table 302.3.3 of the *International Building Code* or Section R321 of the *International Residential Code* for the separate occupancies, or with approved compliance alternatives, the provisions of this section which apply to each occupancy shall apply to the entire building. Where there are conflicting provisions, those requirements which

secure the greater public safety shall apply to the entire building or structure.

**1201.2.3 Additions.** Additions to existing buildings shall comply with the requirements of the *International Building Code*, *International Residential Code* and this code for new construction. The combined height and area of the existing building and the new addition shall not exceed the height and area allowed by Chapter 5. Where a fire wall that complies with Section 705 of the *International Building Code* is provided between the addition and the existing building, the addition shall be considered a separate building.

**1201.2.4 Alterations and repairs.** An existing building or portion thereof, which does not comply with the requirements of this code for new construction shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently. If, in the alteration or repair, the current level of safety or sanitation is to be reduced, the portion altered or repaired shall conform to the requirements of Chapters 2 through 12 and Chapters 14 through 33 of the *International Building Code*.

**1201.2.5 Accessibility requirements.** All portions of the buildings proposed for change of occupancy shall conform to the accessibility provisions of Chapter 11 of the *International Building Code*.

**1201.3 Acceptance.** For repairs, alterations, additions and changes of occupancy to existing buildings that are evaluated in accordance with this section, compliance with this section shall be accepted by the code official.

**1201.3.1 Hazards.** Where the code official determines that an unsafe condition exists, as provided for in Section 115, such unsafe condition shall be abated in accordance with Section 115.

**1201.3.2 Compliance with other codes.** Buildings that are evaluated in accordance with this section shall comply with the *International Fire Code* and *International Property Maintenance Code*.

**1201.3.3 Compliance with flood hazard provisions.** In flood hazard areas, buildings that are evaluated in accordance with this section shall comply with *International Building Code* Section 1612 if the work covered by this section constitutes substantial improvement.

**1201.4 Investigation and evaluation.** For proposed work covered by this chapter, the building owner shall cause the existing building to be investigated and evaluated in accordance with the provisions of Sections 1201.4 through 1201.9.

**1201.4.1 Structural analysis.** The owner shall have a structural analysis of the existing building made to determine adequacy of structural systems for the proposed alteration, addition or change of occupancy. The existing building shall be capable of supporting the minimum load requirements of Chapter 16 of the *International Building Code*.

**1201.4.2 Submittal.** The results of the investigation and evaluation as required in Section 1201.4, along with proposed compliance alternatives, shall be submitted to the code official.

**1201.4.3 Determination of compliance.** The code official shall determine whether the existing building, with the proposed addition, alteration or change of occupancy, complies with the provisions of this section in accordance with the evaluation process in Sections 1201.5 through 1201.9.

**1201.5 Evaluation.** The evaluation shall be comprised of three categories: fire safety, means of egress and general safety, as described in Sections 1201.5.1 through 1201.5.3.

**1201.5.1 Fire safety.** Included within the fire safety category are the structural fire resistance, automatic fire detection, fire alarm and fire suppression system features of the facility.

**1201.5.2 Means of egress.** Included within the means of egress category are the configuration, characteristics and support features for means of egress in the facility.

**1201.5.3 General safety.** Included within the general safety category are the fire safety parameters and the means of egress parameters.

**1201.6 Evaluation process.** The evaluation process specified herein shall be followed in its entirety to evaluate existing buildings. Table 1201.7 shall be utilized for tabulating the results of the evaluation. References to other sections of this code indicate that compliance with those sections is required in order to gain credit in the evaluation herein outlined. In applying this section to a building with mixed occupancies, where the separation between the mixed occupancies does not qualify for any category indicated in Section 1201.6.16, the score for each occupancy shall be determined and the lower score determined for each section of the evaluation process shall apply to the entire building.

Where the separation between the mixed occupancies qualifies for any category indicated in Section 1201.6.16, the score for each occupancy shall apply to each portion of the building based on the occupancy of the space.

**1201.6.1 Building height.** The value for building height shall be the lesser value determined by the formula in Section 1201.6.1.1. Chapter 5 of the *International Building Code* shall be used to determine the allowable height of the building, including allowable increases due to automatic sprinklers as provided for in Section 504.2. Subtract the actual building height from the allowable and divide by 12 ½ feet. Enter the height value and its sign positive or negative in Table 1201.7 under Safety Parameter 1201.6.1, Building Height, for fire safety, means of egress and general safety. The maximum score for a building shall be 10.

**1201.6.1.1 Height formula.** The following formulas shall be used in computing the building height value.

$$\text{Height value, feet} = \frac{(AH) - (EBH)}{12.5} \times CF$$

$$\text{Height value, stories} = (AS - EBS) \times CF$$

(Equation 12-1)

where:

*AH* = Allowable height in feet from Table 503 of the *International Building Code*.

*EBH* = Existing building height in feet.

*AS* = Allowable height in stories from Table 503 of the *International Building Code*.

*EBS* = Existing building height in stories.

*CF* = 1 if *(AH) - (EBH)* is positive.

*CF* = Construction-type factor shown in Table 1201.6.6(2) if *(AH) - (EBH)* is negative.

Note. Where mixed occupancies are separated and individually evaluated as indicated in Section 1201.6, the values *AH*, *AS*, *EBH* and *EBS* shall be based on the height of the fire area of the occupancy being evaluated.

**1201.6.2 Building area.** The value for building area shall be determined by the formula in Section 1201.6.2.2. Section 503 of the *International Building Code* and the formula in Section 1201.6.2.1 shall be used to determine the allowable area of the building. The allowable area shall be the lesser value calculated by equations 12-2 and 12-3. This shall include any allowable increases due to open

perimeter and automatic sprinklers as provided for in Section 506 of the *International Building Code*. Subtract the actual building area from the allowable area and divide by 1,200 square feet (112 m<sup>2</sup>). Enter the area value and its sign (positive or negative) in Table 1201.7 under Safety Parameter 201.6.2, Building Area, for fire safety, means of egress and general safety. In determining the area value, the maximum permitted positive value for area is 50 percent of the fire safety score as listed in Table 1201.8, Mandatory Safety Scores.

**1201.6.2.1 Allowable area formula.** The following formula shall be used in computing allowable area:

$$Aa = \frac{(100 + If + Is) \times At}{100} \quad \text{(Equation 12-2)}$$

Amax. = 3 x Aa, as calculated in accordance with Section 503.3 of the *International Building Code*.

$$Aa, \text{max.} = Amax. \quad \text{(Equation 12-3)}$$

where:

Aa = Allowable area per floor

Is = Area increase due to sprinkler protection percent as calculated in accordance with Section 506.3 of the *International Building Code*.

If = Area increase due to frontage, percent as calculated in accordance with Section 506.2 of the *International Building Code*.

At = Tabular area per floor in accordance with Table 503 of the *International Building Code* square feet

Amax. = Total area of the entire building.

Aa,max. = Allowable area per floor based on the limitations of Section 503.3 of the *International Building Code*.

**1201.6.2.2 Area formula.** The following formula shall be used in computing the area value. Determine the Area Value for each occupancy fire area on a floor by floor basis. For each occupancy, choose the minimum Area Value of the set of values obtained for the particular occupancy.

$$\text{Area value } i = \frac{\text{Allowable area}_i}{1,200 \text{ square feet}} \left[ 1 - \left( \frac{\text{Actual area}_i}{\text{Allowable area}_i} + \dots + \frac{\text{Actual area}_n}{\text{Allowable area}_n} \right) \right]$$

$$\text{(Equation 12-4)}$$

where:

$i$  = value for an individual separated occupancy on a floor.

$n$  = number of separated occupancies on a floor.

**1201.6.3 Compartmentation.** Evaluate the compartments created by fire barrier walls which comply with Sections 1201.6.3.1 and 1201.6.3.2 and which are exclusive of the wall elements considered under Sections 1201.6.4 and 1201.6.5. Conforming compartments shall be figured as the net area and do not include shafts, chases, stairways, walls or columns. Using Table 1201.6.3, determine the appropriate compartmentation value (CV) and enter that value into Table 1201.7 under Safety Parameter 1201.6.3, Compartmentation, for fire safety, means of egress and general safety.

**1201.6.3.1 Wall construction.** A wall used to create separate compartments shall be a fire barrier conforming to Section 706 of the *International Building Code* with a fire resistance rating of not less than 2 hours. Where the building is not divided into more than one compartment, the compartment size shall be taken as the total floor area on all floors. Where there is more than one compartment within a story, each compartmented area on such story shall be provided with a horizontal exit conforming to Section 1005.3.5 of the *International Building Code*. The fire door serving as the horizontal exit between compartments shall be so installed, fitted and gasketed that such fire door will provide a substantial barrier to the passage of smoke.

**1201.6.3.2 Floor/ceiling construction.** A floor/ceiling assembly used to create compartments shall conform to Section 710 of the *International Building Code* and shall have a fire resistance rating of not less than 2 hours.

**1201.6.4 Tenant and dwelling unit separations.** Evaluate the fire resistance rating of floors and walls separating tenants, including dwelling units, and not evaluated under Sections 1201.6.3 and 1201.6.5. Under the categories and occupancies in Table 1201.6.4, determine the appropriate value and enter that value in Table 1201.7 under Safety Parameter 1201.6.4, Tenant and Dwelling Unit Separation, for fire safety, means of egress and general safety.

**1201.6.4.1 Categories.** The categories for tenant and dwelling unit separations are:

1. Category a — No fire partitions; incomplete fire partitions; no doors; doors not self-closing or automatic closing.

2. Category b — Fire partitions or floor assembly less than 1-hour fire resistance rating or not constructed in accordance with Sections 708 or 710 of the *International Building Code*, respectively.
3. Category c — Fire partitions with 1 hour or greater fire resistance rating constructed in accordance with Section 708 of the *International Building Code* and floor assemblies with 1-hour but less than 2-hour fire resistance rating constructed in accordance with Section 710 of the *International Building Code* or with only one tenant within the fire area.
4. Category d — Fire barriers with 1-hour but less than 2-hour fire resistance rating constructed in accordance with Section 706 of the *International Building Code* and floor assemblies with 2-hour or greater fire resistance rating constructed in accordance with Section 710 of the *International Building Code*.
5. Category e — Fire barriers and floor assemblies with 2-hour or greater fire resistance rating and constructed in accordance with Sections 706 and 710 of the *International Building Code*, respectively.

**TABLE 1201.6.3  
COMPARTMENTATION VALUES**

OCCUPANCY	CATEGORIES				
	a Compartment size equal to or greater than 15,000 square feet	b Compartment size of 10,000 square feet	c Compartment size of 7,500 square feet	d Compartment size of 5,000 square feet	e Compartment size of 2,500 square feet or less
A-1, A-3	0	6	10	14	18
A-2	4	4	10	14	18
A-4, B, E, S-2	0	5	10	15	20
F, M, R, S-1	0	4	10	16	22



**TABLE 1201.6.4  
SEPARATION VALUES**

OCCUPANCY	CATEGORIES				
	a	b	c	d	e
A-1	0	0	0	0	1
A-2	-5	-3	0	1	3
R	-4	-2	0	2	4
A-3, A-4, B, E, F, M, S-1	-4	-3	0	2	4
S-2	-5	-2	0	2	4

**1201.6.5 Corridor walls.** Evaluate the fire resistance rating and degree of completeness of walls which create corridors serving the floor, and constructed in accordance with Section 1004 of the *International Building Code*. This evaluation shall not include the wall elements considered under Sections 1201.6.3 and 1201.6.4. Under the categories and Groups in Table 1201.6.5, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.5, Corridor Walls, for fire safety, means of egress and general safety.

**1201.6.5.1 Categories.** The categories for corridor walls are:

1. Category a — No fire partitions; incomplete fire partitions; no doors; or doors not self-closing.
2. Category b — Less than 1-hour fire resistance rating or not constructed in accordance with Section 708.4 of the *International Building Code*.
3. Category c — 1-hour to less than 2-hour fire resistance rating, with doors conforming to Section 714 of the *International Building Code* or without corridors as permitted by Section 1004 of the *International Building Code*.
4. Category d — 2-hour or greater fire resistance rating, with doors conforming to Section 714 of the *International Building Code*.

**TABLE 1201.6.5  
CORRIDOR WALL VALUES**

OCCUPANCY	CATEGORIES			
	a	b	c <sup>a</sup>	d <sup>a</sup>
A-1	-10	-4	0	2
A-2	-30	-12	0	2
A-3, F, M, R, S-1	-7	-3	0	2
A-4, B, E, S-2	-5	-2	0	5

- a. Corridors not providing at least one-half the travel distance for all occupants on a floor shall use Category b.

**1201.6.6 Vertical openings.** Evaluate the fire resistance rating of vertical exit enclosures, hoistways, escalator openings and other shaft enclosures within the building, and openings between two or more floors. Table 1201.6.6(1) contains the appropriate protection values. Multiply that value by the construction-type factor found in Table 1201.6.6(2). Enter the vertical opening value and its sign, positive or negative, in Table 1201.7 under Safety Parameter 1201.6.6, Vertical Openings, for fire safety, means of egress and general safety. If the structure is a one-story building, enter a value of 2. Unenclosed vertical openings that conform to the requirements of Section 707 of the *International Building Code* shall not be considered in the evaluation of vertical openings.

**1201.6.6.1 Vertical opening formula.** The following formula shall be used in computing vertical opening value.

$$VO = PV \times CF \quad \text{(Equation 12-5)}$$

VO = Vertical opening value.  
PV = Protection value from Table 1201.6.6(1)  
CF = Construction type factor from Table 1201.6.6(2)

**TABLE 1201.6.6(1)  
VERTICAL OPENING PROTECTION VALUE**

PROTECTION	VALUE
None (unprotected opening)	-2 times number floors connected
Less than 1 hour	-1 times number floors connected
1 to less than 2 hours	1
2 hours or more	2

**TABLE 1201.6.6(2)**  
**CONSTRUCTION-TYPE FACTOR**

F A C T O R	TYPE OF CONSTRUCTION								
	I-A	I-B	II-A	II-B	III-A	III-B	IV	V-A	V-B
	1.2	1.5	2.2	3.5	2.5	3.5	2.3	3.3	7

**1201.6.7 HVAC systems.** Evaluate the ability of the HVAC system to resist the movement of smoke and fire beyond the point of origin. Under the categories in Section 1201.6.7.1, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.7, HVAC Systems, for fire safety, means of egress and general safety.

**1201.6.7.1 Categories.** The categories for HVAC systems are:

1. Category a — Plenums not in accordance with Section 602 of the *International Mechanical Code*. -10 points.
2. Category b — Air movement in egress elements not in accordance with Section 1004.3.2.4 of the *International Building Code*. -5 points.
3. Category c — Both categories a and b are applicable. -15 points.
4. Category d — Compliance of the HVAC system with Section 1004.3.2.4 of the *International Building Code* and Section 602 of the *International Mechanical Code*. 0 points.
5. Category e — Systems serving one story; or a central boiler/chiller system without ductwork connecting two or more stories. +5 points.

**1201.6.8 Automatic fire detection.** Evaluate the smoke detection capability based on the location and operation of automatic fire detectors in accordance with Section 907 of the *International Building Code* and the *International Mechanical Code*. Under the categories and occupancies in Table 1201.6.8, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.8, Automatic Fire Detection, for fire safety, means of egress and general safety.

**1201.6.8.1 Categories.** The categories for automatic fire detection are:

1. Category a — None.
2. Category b — Existing smoke detectors in HVAC systems and maintained in accordance with the *International Fire Code*.
3. Category c — Smoke detectors in HVAC systems. The detectors are installed in

accordance with the requirements for new buildings in the *International Mechanical Code*.

4. Category d — Smoke detectors throughout all floor areas other than individual guest rooms, tenant spaces and dwelling units.
5. Category e — Smoke detectors installed throughout the fire area.

**TABLE 1201.6.8**  
**AUTOMATIC FIRE DETECTION VALUES**

OCCUPANCY	CATEGORIES				
	a	b	c	d	e
A-1, A-3, F, M, R, S-1	-10	-5	0	2	6
A-2	-25	-5	0	5	9
A-4, B, E, S-2	-4	-2	0	4	8

**1201.6.9 Fire alarm systems.** Evaluate the capability of the fire alarm system in accordance with Section 907. Under the categories and occupancies in Table 1201.6.9, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.9, Fire Alarm, for fire safety, means of egress and general safety.

**1201.6.9.1 Categories.** The categories for fire alarm systems are:

1. Category a — None.
2. Category b — Fire alarm system with manual fire alarm boxes in accordance with Section 907.3 of the *International Building Code* and alarm notification appliances in accordance with Section 907.9 of the *International Building Code*.
3. Category c — Fire alarm system in accordance with Section 907 of the *International Building Code*.
4. Category d — Category c plus a required emergency voice/alarm communications system and a fire command station that conforms to Section 403.8 of the *International Building Code* and contains the emergency voice/alarm communications system controls, fire department communication system controls and any other controls specified in Section 911 of the *International Building Code* where those systems are provided.

**TABLE 1201.6.9  
FIRE ALARM SYSTEM VALUES**

OCCUPANCY	CATEGORIES			
	a	b <sup>a</sup>	c	d
A-1,A-2,A-3, A-4, B, E,R	-10	-5	0	5
F, M, S	0	5	10	15

- a. For buildings equipped throughout with an automatic sprinkler system, add 2 points for activation by a sprinkler water flow device.

**1201.6.10 Smoke control.** Evaluate the ability of a natural or mechanical venting, exhaust or pressurization system to control the movement of smoke from a fire. Under the categories and occupancies in Table 1201.6.10, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.10, Smoke Control, for means of egress and general safety.

**TABLE 1201.6.10  
SMOKE CONTROL VALUES**

OCCUPANCY	CATEGORIES					
	a	b	c	d	e	f
A-1, A-2, A-3	0	1	2	3	6	6
A-4, E	0	0	0	1	3	5
B, M, R	0	2 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	4 <sup>a</sup>
F, S,	0	2 <sup>a</sup>	2 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>

- a. This value shall be 0 if compliance with Category d or e in Section 1201.6.8.1 has not been obtained.

**1201.6.10.1 Categories.** The categories for smoke control are:

1. Category a — None.
2. Category b — The building is equipped throughout with an automatic sprinkler system. Openings are provided in exterior walls at the rate of 20 square feet (1.86 m<sup>2</sup>) per 50 linear feet (15 240 mm) of exterior wall in each story and distributed around the building perimeter at intervals not exceeding 50 feet (15 240 mm). Such openings shall be readily openable from the inside without a key or separate tool and shall be provided with ready access thereto. In lieu of operable openings, clearly and permanently marked tempered glass panels shall be used.
3. Category c — One enclosed exit stairway, with ready access thereto, from each occupied floor of the building. The stairway has operable exterior windows and the building has openings in accordance with Category b.

4. Category d — One smokeproof enclosure and the building has openings in accordance with Category b.
5. Category e — The building is equipped throughout with an automatic sprinkler system. Each fire area is provided with a mechanical air-handling system designed to accomplish smoke containment. Return and exhaust air shall be moved directly to the outside without recirculation to other fire areas of the building under fire conditions. The system shall exhaust not less than six air changes per hour from the fire area. Supply air by mechanical means to the fire area is not required. Containment of smoke shall be considered as confining smoke to the fire area involved without migration to other fire areas. Any other tested and approved design which will adequately accomplish smoke containment is permitted.
6. Category f — Each stairway shall be one of the following. a smokeproof enclosure in accordance with Section 1005.3.2.5 of the *International Building Code*; pressurized in accordance with Section 909.20.5 of the *International Building Code*; or shall have operable exterior windows.

**1201.6.11 Means of egress capacity and number.** Evaluate the means of egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to Sections 1004 of the *International Building Code* (with the exception of Section 1004.2.4), 1003 of the *International Building Code* (except that the minimum width required by this section shall be determined solely by the width for the required capacity in accordance with Tables 1003.2.3 of the *International Building Code*), 1005 and 1006 of the *International Building Code*. The number of exits credited are the number that are available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 605.3.1.2. Under the categories and occupancies in Table 1201.6.11, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.11, Means of Egress Capacity, for means of egress and general safety.

**1201.6.11.1 Categories.** The categories for means of egress capacity and number of exits are:

1. Category a - Compliance with the minimum required means of egress capacity or number of exits is achieved through the use of a fire escape in accordance with Section 605.3.1.2

2. Category b — Capacity of the means of egress complies with Section 1003 of the *International Building Code* and the number of exits complies with the minimum number required by Section 1005 of the *International Building Code*.
3. Category c — Capacity of the means of egress is equal to or exceeds 125 percent of the required means of egress capacity, the means of egress complies with the minimum required width dimensions specified in the code and the number of exits complies with the minimum number required by Section 1005 of the *International Building Code*.
4. Category d — The number of exits provided exceeds the number of exits required by Section 1005 of the *International Building Code*. Exits shall be located a distance apart from each other equal to not less than that specified in Section 1004.2.2 of the *International Building Code*.
5. Category e — The area being evaluated meets both Categories c and d.

**TABLE 1201.6.11  
MEANS OF EGRESS VALUES**

OCCUPANCY	CATEGORIES				
	a	b	c	d	e
A-1, A-2, A-3, A-4, E	-10	0	2	8	10
M	-3	0	1	2	4
B, F, S	-1	0	0	0	0
R	-3	0	0	0	0

- a. The values indicated are for buildings six stories or less in height. For buildings over six stories in height, add an additional -10 points.

**1201.6.12 Dead ends.** In spaces required to be served by more than one means of egress, evaluate the length of the exit access travel path in which the building occupants are confined to a single path of travel. Under the categories and occupancies in Table 1201.6.12, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.12, Dead Ends, for means of egress and general safety.

**1201.6.12.1 Categories.** The categories for dead ends are:

1. Category a — Dead end of 35 feet (10 670 mm) in unsprinklered buildings or 70 feet (21 340 mm) in sprinklered buildings.
2. Category b — Dead end of 20 feet (6096 mm); or 50 feet (15 240 mm) in Group B in

accordance with Section 1004.3.2.3, exception 2 of the *International Building Code*.

3. Category c — No dead ends; or ratio of length to width ( $l/w$ ) is less than 2.5:1.

**TABLE 1201.6.12  
DEAD-END VALUES**

OCCUPANCY	CATEGORIES		
	a	b	c
A-1, A-3, A-4, B, E, F, M, R, S	-2	0	2
A-2, E	-2	0	2

- a. For dead-end distances between categories, the dead-end value shall be obtained by linear interpolation.

**1201.6.13 Maximum travel distance to an exit.**

Evaluate the length of exit access travel to an approved exit. Determine the appropriate points in accordance with the following equation and enter that value into Table 1201.7 under Safety Parameter 1201.6.13, Maximum Exit Access Travel Distance, for means of egress and general safety. The maximum allowable exit access travel distance shall be determined in accordance with Section 1004.2.4 of the *International Building Code*.

$$\text{Points} = 20 \times \frac{\text{Maximum allowable travel distance} - \text{Maximum actual travel distance}}{\text{Max. allowable travel distance}}$$

**1201.6.14 Elevator control.** Evaluate the passenger elevator equipment and controls that are available to the fire department to reach all occupied floors. Elevator recall controls shall be provided in accordance with the *International Fire Code*. Under the categories and occupancies in Table 1201.6.14, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.14, Elevator Control, for fire safety, means of egress and general safety. The values shall be zero for a single story building.

**1201.6.14.1 Categories.** The categories for elevator controls are:

1. Category a — No elevator.
2. Category b — Any elevator without Phase I and II recall.
3. Category c — All elevators with Phase I and II recall as required by the *International Fire Code*.
4. Category d — All meet Category c; or Category b where permitted to be without

recall; and at least one elevator that complies with new construction requirements serves all occupied floors.

**TABLE 1201.6.14  
ELEVATOR CONTROL VALUES**

ELEVATOR TRAVEL	CATEGORIES			
	a	b	c	d
Less than 25 feet of travel above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-2	0	0	+2
Travel of 25 feet or more above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-4	NP	0	+4

For SI: 1 foot = 304.8 mm.

**1201.6.15 Means of egress emergency lighting.**

Evaluate the presence of and reliability of means of egress emergency lighting. Under the categories and occupancies in Table 1201.6.15, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.15, Means of Egress Emergency Lighting, for means of egress and general safety.

**1201.6.15.1 Categories.** The categories for means of egress emergency lighting are:

1. Category a — Means of egress lighting and exit signs not provided with emergency power in accordance with Section 2702 of the *International Building Code*.
2. Category b — Means of egress lighting and exit signs provided with emergency power in accordance with Section 2702 of the *International Building Code*.
3. Category c — Emergency power provided to means of egress lighting and exit signs which provides protection in the event of power failure to the site or building.

**TABLE 1201.6.15  
MEANS OF EGRESS EMERGENCY LIGHTING VALUES**

NUMBER OF EXITS REQUIRED BY SECTION 1005.2 OF THE <i>International Building Code</i>	CATEGORIES		
	a	b	c
Two or more exits	NP	0	4
Minimum or one exit	0	1	1

**1201.6.16 Mixed occupancies.** Where a building has two or more occupancies that are not in the same occupancy classification, the separation between the mixed occupancies shall be evaluated in accordance with this section. Where there is no separation

between the mixed occupancies or the separation between mixed occupancies does not qualify for any of the categories indicated in Section 1201.6.16.1, the building shall be evaluated as indicated in Section 1201.6 and the value for mixed occupancies shall be zero. Under the categories and occupancies in Table 1201.6.16, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.16, Mixed Occupancies, for fire safety and general safety. For buildings without mixed occupancies, the value shall be zero.

**1201.6.16.1 Categories.** The categories for mixed occupancies are:

1. Category a — Minimum 1-hour fire barriers between occupancies.
2. Category b — Fire barriers between occupancies in accordance with Section 302.3.3 of the *International Building Code*.
3. Category c — Fire barriers between occupancies having a fire resistance rating of not less than twice that required by Section 302.3.3 of the *International Building Code*.

**TABLE 1201.6.16  
MIXED OCCUPANCY VALUES<sup>a</sup>**

OCCUPANCY	CATEGORIES		
	a	b	c
A-1, A-2, R	-10	0	10
A-3, A-4, B, E, F, M, S	-5	0	5

- a. For fire-resistance ratings between categories, the value shall be obtained by linear interpolation.

**1201.6.17 Sprinklers.** Evaluate the ability to suppress a fire based on the installation of an automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Building Code*. "Required sprinklers" shall be based on the requirements of this code. Under the categories and occupancies in Table 1201.6.17, determine the appropriate value and enter that value into Table 1201.7 under Safety Parameter 1201.6.17, Automatic Sprinklers, for fire safety, means of egress divided by 2 and general safety. Hi-Rise buildings defined in Section 403.1 of the *International Building Code* that undergo a change in occupancy to Use groups R, shall be equipped throughout with an automatic sprinkler system in accordance with Section 403.2 and Chapter 9 of the *International Building Code*.

**1201.6.17.1 Categories.** The categories for automatic sprinkler system protection are:

1. Category a — Sprinklers are required throughout; sprinkler protection is not provided

or the sprinkler system design is not adequate for the hazard protected in accordance with Section 903 of the *International Building Code*.

2. Category b — Sprinklers are required in a portion of the building; sprinkler protection is not provided or the sprinkler system design is not adequate for the hazard protected in accordance with Section 903 of the *International Building Code*.
3. Category c — Sprinklers are not required; none are provided.
4. Category d — Sprinklers are required in a portion of the building; sprinklers are provided in such portion; the system is one which complied with the code at the time of installation and is maintained and supervised in accordance with Section 903 of the *International Building Code*.
5. Category e — Sprinklers are required throughout; sprinklers are provided throughout in accordance with Chapter 9 of the *International Building Code*.
6. Category f — Sprinklers are not required throughout; sprinklers are provided throughout in accordance with Chapter 9 of the *International Building Code*.

**TABLE 1201.6.17  
SPRINKLER SYSTEM VALUES**

OCCUPANCY	CATEGORIES					
	a	b	c	d	e	f
A-1, A-3, F, M, R, S1	-6	-3	0	2	4	6
A-2	-4	-2	0	1	2	4
A-4, B, E, S-2	-12	-6	0	3	6	12

A. & B These options cannot be taken if category a is obtained in Section 1201.6.18.

**1201.6.18 Standpipes:** Evaluate the ability to initiate attack on a fire by making supply of water available readily through the installation of Standpipes in accordance with Section 905.0 of *International Building Code*. "Required Standpipes" shall be based on the requirements of *International Building Code*. Under the categories and occupancies in Table 1201.6.18, determine the appropriate value and enter that value into table 1201.7 under Safety Parameter 1201.6.18, Standpipes, for fire safety, means of egress and general safety.

**1201.6.18.1 Standpipe:** The categories for Standpipe systems are:

1. Category a — Standpipes are required; Standpipe is not provided or the Standpipe system design is not in compliance with

Sections 905.3 of the *International Building Code*.

2. Category b — Standpipes are not required; none are provided.
3. Category c — Standpipes are required; standpipes are provided in accordance with Section 905 of the *International Building Code*.
4. Category d — Standpipes are not required; standpipes are provided in accordance with Section 905 of the *International Building Code*.

**TABLE 1201.6.18  
STANDPIPE SYSTEM VALUES**

Occupancy	Categories			
	a	b	c	d
A-1,A-3,F,M,R,S-1,	-6	0	4	6
A-2	-4	0	2	4
A-4,B,E,S-2	-12	0	6	12

a. This option cannot be taken if category a or b in section 1201.6.17 has been obtained.

**1201.6.19 Incidental use.** Evaluate the protection of incidental use areas in accordance with Section 302.1.1 of the *International Building Code*. Do not include those where this code requires suppression throughout the building including covered mall buildings, high-rise buildings, public garages and unlimited area buildings. Assign the lowest score for the building or fire area being evaluated. If there area no specific occupancy areas in the building or fire area being evaluated, the value shall be zero.

**1201.7 Building score.** After determining the appropriate data from Section 1201.6, enter those data in Table 1201.7 and total the building score.

**1201.8 Safety scores.** The values in Table 1201.8 are the required mandatory safety scores for the evaluation process listed in Section 1201.6.

**1201.9 Evaluation of building safety.** The mandatory safety score in Table 1201.8 shall be subtracted from the building score in Table 1201.7 for each category. Where the final score for any category equals zero or more, the building is in compliance with the requirements of this section for that category. Where the final score for any category is less than zero, the building is not in compliance with the requirements of this section.

**1201.9.1 Mixed occupancies.** For mixed occupancies, the following provisions shall apply:

1. Where the separation between mixed occupancies does not qualify for any category indicated in Section 1201.6.16, the mandatory safety scores for the occupancy with the lowest

general safety score in Table 1201.8 shall be utilized. (See Section 1201.6.)

2. Where the separation between mixed occupancies qualifies for any category indicated in Section 1201.6.16, the mandatory safety scores for each occupancy shall be placed against the evaluation scores for the appropriate occupancy.

**TABLE 1201.6.19  
INCIDENTAL USE AREA VALUES<sup>a</sup>**

PROTECTION REQUIRED BY TABLE 302.1.1 OF THE IBC	PROTECTION PROVIDED						
	None	1 Hour	AFSS	AFSS with SP	1 Hour and AFSS	2 Hours	2 Hours and AFSS
2 Hours and ASS	-4	-3	-2	-2	-1	-2	0
2 Hours, or 1 Hour and AFSS	-3	-2	-1	-1	0	0	0
1 Hour and AFSS	-3	-2	-1	-1	0	-1	0
1 Hour	-1	0	-1	-1	0	0	
1 Hour, or AFSS with SP	-1	0	-1	-1	0	0	0
AFSS with SP	-1	-1	-1	-1	0	-1	0
1 Hour or AFSS	-1	0	0	0	0	0	0

a. AFSS = Automatic fire suppression system; SP = Smoke partitions (See Section 302.1.1.1).

Note: For Table 1201.7, see page 674.

**TABLE 1201.7  
SUMMARY SHEET - BUILDING CODE**

Existing occupancy _____		Proposed occupancy _____	
Year building was constructed _____		Number of stories _____ Height in Feet _____	
Type of construction _____		Area per floor _____	
Percentage of Frontage Increase _____ %		Percentage of height reduction _____ %	
Completely suppressed: Yes _____ No _____		Corridor wall rating _____	
Compartmentation: Yes _____ No _____		Required door closers: Yes _____ No _____	
Fire resistance rating of vertical opening enclosures _____			
Type of HVAC system _____		Serving number of floors _____	
Automatic fire detection: Yes: _____ No _____		Type and Location _____	
Fire alarm system: Yes: _____ No _____		Type _____	
Smoke control: Yes: _____ No _____		Type _____	
Adequate exit routes: Yes: _____ No _____		Dead ends: Yes _____ No _____	
Maximum exit access travel distance _____		Elevator controls: Yes _____ No _____	
Means of egress emergency lighting: Yes _____ No _____		Mixed occupancies: Yes _____ No _____	
<b>SAFETY PARAMETERS</b>	<b>FIRE SAFETY (FS)</b>	<b>MEANS OF EGRESS (ME)</b>	<b>GENERAL SAFETY (GS)</b>
1201.6.1 Building Height 1201.6.2 Building Area 1201.6.3 Compartmentation			
1201.6.4 Tenant and Dwelling Unit Separations 1201.6.5 Corridor Walls 1201.6.6 Vertical Openings			
1201.6.7 HVAC Systems 1201.6.8 Automatic Fire Detection 1201.6.9 Fire Alarm System			
1201.6.10 Smoke control 1201.6.11 Means of egress 1201.6.12 Dead ends	**** **** ****		
1201.6.13 Maximum Exit Access Travel Distance 1201.6.14 Elevator Control 1201.6.15 Means of Egress Emergency Lighting	**** ****		
1201.6.16 Mixed Occupancies 1201.6.17 Sprinklers 1201.6.18 Standpipes 1201.6.19 Incidental Use Area Protection		**** divide by 2	
Building score - total value			

\*\*\*\*No applicable value to be inserted



**TABLE 1201.8**  
**MANDATORY SAFETY SCORES<sup>a</sup>**

OCCUPANCY	FIRE SAFETY (MFS)	MEANS OF EGRESS (MME)	GENERAL SAFETY (MGS)
A-1	20	31	31
A-2	21	32	32
A-3	22	33	33
A-4, E	29	40	40
B	30	40	40
F	24	34	34
M	23	40	40
R	21	38	38
S-1	19	29	29
S-2	29	39	39

- <sup>a</sup> MFS = Mandatory Fire Safety  
MME = Mandatory Means of Egress  
MGS = Mandatory General Safety

**TABLE 1201.9**  
**EVALUATION FORMULAS<sup>a</sup>**

FORMULA	T1207.1	T1201.7	SCORE	PASS	FAIL
FS-MFS > 0	_____ (FS) -	_____ (MFS) =	_____	_____	_____
ME -MME \$ 0	_____ (ME) -	_____ (MME) =	_____	_____	_____
GS-MGS \$ 0	_____ (GS) -	_____ (MGS) =	_____	_____	_____

- <sup>a</sup> FS = Fire Safety      MFS = Mandatory Fire Safety  
ME = Means of Egress      MME = Mandatory Means of Egress  
GS = General Safety      MGS = Mandatory General Safety



# CHAPTER 13

## CONSTRUCTION SAFEGUARDS

### SECTION 1301 GENERAL

**[B]1301.1 Scope.** The provisions of the chapter shall govern safety during construction which is under the jurisdiction of this code and the protection of adjacent public and private properties.

**[B]1301.2 Storage and placement.** Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or adjoining property for the duration of the construction project.

**1301.3 Alterations, repairs and additions.** Required exits, existing structural elements, fire protection devices and sanitary safeguards shall be maintained at all times during alterations, repairs or additions to any building or structure.

#### Exceptions:

1. When such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.
2. When the existing building is not occupied.

**[B]1301.4 Manner of removal.** Waste materials shall be removed in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way.

**1301.5 Facilities required.** Sanitary facilities shall be provided during construction or demolition activities in accordance with the *International Plumbing Code*.

**1301.6 Protection of pedestrians.** Pedestrians shall be protected during construction and demolition activities as required by Sections 1301.6.1 through 1301.6.7 and Table 1301.6. Signs shall be provided to direct pedestrian traffic.

**TABLE 1301.6  
PROTECTION OF PEDESTRIANS**

HEIGHT OF CONSTRUCTION	DISTANCE OF CONSTRUCTION TO LOT LINE	TYPE OF PROTECTION REQUIRED
8 feet or less	Less than 5 feet	Construction railings
	5 feet or more	None
More than 8 feet	Less than 5 feet	Barrier and covered walkway
	5 feet or more, but not more than one-fourth the height of construction	Barrier and covered walkway
	5 feet or more, but between one-fourth and one-half the height of construction	Barrier
	5 feet or more, but exceeding one-half the height of construction	None

For SI: 1 foot = 304.8 mm.

**[B]1301.6.1 Walkways.** A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the authority having jurisdiction authorizes the sidewalk to be fenced or closed. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than 4 feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be accessible in accordance with Chapter 11 of the *International Building Code* and shall be designed to support all imposed loads and in no case shall the design live load be less than 150 psf (7.2 kN/m<sup>2</sup>).

**[B]1301.6.2 Directional barricades.** Pedestrian traffic shall be protected by a directional barricade where the walkway extends into the street. The directional barricade shall be of sufficient size and construction to direct vehicular traffic away from the pedestrian path.

**[B]1301.6.3 Construction railings.** Construction railings shall be at least 42 inches (1067 mm) in height and shall be sufficient to direct pedestrians around construction areas.

**[B]1301.6.4 Barriers.** Barriers shall be a minimum of 8 feet (2438 mm) in height and shall be placed on the side of the walkway nearest the construction. Barriers shall extend the entire length of the construction site. Openings in such barriers shall be protected by doors which are normally kept closed.

**[B]1301.6.4.1 Barrier design.** Barriers shall be designed to resist loads required in Chapter 16 of the *International Building Code* unless constructed as follows:

1. Barriers shall be provided with 2 × 4 top and bottom plates.
2. The barrier material shall be a minimum of ¾ inch (19.1 mm) inch boards or ¼ inch (6.4 mm) wood structural use panels.
3. Wood structural use panels shall be bonded with an adhesive identical to that for exterior wood structural use panels.
4. Wood structural use panels ¼ inch (6.4 mm) or 1/16 inch (23.8 mm) in thickness shall have studs spaced not more than 2 feet (610 mm) on center.
5. Wood structural use panels ⅝ inch (9.5 mm) or ½ inch (12.7 mm) in thickness shall have studs spaced not more than 4 feet (1219 mm) on center, provided a 2 inch by 4 inch (51 mm by 102 mm) stiffener is placed horizontally at the mid height where the stud spacing exceeds 2 feet (610 mm) on center.
6. Wood structural use panels 5/8 inch (15.9 mm) or thicker shall not span over 8 feet (2438 mm).

**[B]1301.6.5 Covered walkways.** Covered walkways shall have a minimum clear height of 8 feet (2438 mm) as measured from the floor surface to the canopy overhead. Adequate lighting shall be provided at all times. Covered walkways shall be designed to support all imposed loads. In no case shall the design live load be less than 150 psf (7.2 kN/m<sup>2</sup>) for the entire structure.

**Exception:** Roofs and supporting structures of covered walkways for new, light-frame construction not exceeding two stories in height are permitted to be designed for a live load of 75 psf (3.6kN/m<sup>2</sup>) or the loads imposed on them, whichever is greater. In lieu of such designs, the roof and supporting structure of a covered walkway is permitted to be constructed as follows:

1. Footings shall be continuous 2 × 6 members.
2. Posts not less than 4 × 6 shall be provided on both sides of the roof and spaced not more than 12 feet (3658 mm) on center.
3. Stringers not less than 4 × 12 shall be placed on edge upon the posts.
4. Joists resting on the stringers shall be at least 2 × 8 and shall be spaced not more than 2 feet (610 mm) on center.
5. The deck shall be planks at least 2 inches (51 mm) thick or wood structural panels with an exterior exposure durability classification at

least 23/32 inch (18.3 mm) thick nailed to the joists.

6. Each post shall be knee-braced to joists and stringers by 2 × 4 minimum members 4 feet (1219 mm) long.
7. A 2 × 4 minimum curb shall be set on edge along the outside edge of the deck.

**[B]1301.6.6 Repair, maintenance and removal.** Pedestrian protection required by Section 1301.6 shall be maintained in place and kept in good order for the entire length of time pedestrians may be endangered. The owner or the owner's agent, upon the completion of the construction activity, shall immediately remove walkways, debris and other obstructions and leave such public property in as good a condition as it was before such work was commenced.

**[B]1301.6.7 Adjacent to excavations.** Every excavation on a site located 5 feet (1524 mm) or less from the street lot line shall be enclosed with a barrier not less than 6 feet (1829 mm) high. Where located more than 5 feet (1524 mm) from the street lot line, a barrier shall be erected when required by the code official. Barriers shall be of adequate strength to resist wind pressure as specified in Chapter 16 of the *International Building Code*.

## **[B]SECTION 1302 PROTECTION OF ADJOINING PROPERTY**

**1302.1 Protection required.** Adjoining public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water run-off and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings advising them that the excavation is to be made and that the adjoining buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

## **[B]SECTION 1303 TEMPORARY USE OF STREETS, ALLEYS AND PUBLIC PROPERTY**

**1303.1 Storage and handling of materials.** The temporary use of streets or public property for the storage or handling of materials or of equipment required for construction or demolition, and the protection provided to the public shall comply with the provisions of the authority having jurisdiction and Sections 1303.1.

**1303.2 Obstructions.** Construction materials and equipment shall not be placed or stored so as to obstruct

access to fire hydrants, standpipes, fire or police alarm boxes, catch basins or manholes, nor shall such material or equipment be located within 20 feet (6.1 m) of a street intersection, or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

**1303.3 Utility fixtures.** Building materials, fences, sheds or any obstruction of any kind shall not be placed so as to obstruct free approach to any fire hydrant, fire department connection, utility pole, manhole, fire alarm box, or catch basin, or so as to interfere with the passage of water in the gutter. Protection against damage shall be provided to such utility fixtures during the progress of the work, but sight of them shall not be obstructed.

## **[B]SECTION 1304 FIRE EXTINGUISHERS**

**1304.1 Where required.** All structures under construction, alteration or demolition shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated. An approved portable fire extinguisher shall be provided in every storage and construction shed. The code official is authorized to require additional approved portable fire extinguishers where special hazards exist, such as flammable or combustible liquid storage hazards. Fire extinguishers shall comply with Section 906 of the *International Fire Code*.

**1304.2 Fire hazards.** The provisions of this code and of the *International Fire Code* shall be strictly observed to safeguard against all fire hazards attendant upon construction operations.

## **SECTION 1305 EXITS**

**1305.1 Stairways required.** Where an existing building exceeding 50 feet (15 240 mm) in height is altered, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are available for egress as the construction progresses.

**1305.2 Maintenance of exits.** Required exits shall be maintained at all times during alterations and additions to any building.

## **SECTION 1306 STANDPIPES SYSTEM**

**1306.1 Where required.** Buildings required to have a standpipe system in accordance with this code shall be provided with not less than one standpipe for use during construction. Such standpipes shall be installed where the progress of construction is not more than 40 feet (12

192 mm) in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

**[B]1306.2 Buildings being demolished.** Where a building or portion of a building is being demolished and a standpipe is existing within such a building, such standpipe shall be maintained in an operable condition so as to be available for use by the fire department. Such standpipe shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.

**[B]1306.3 Detailed requirements.** Standpipes shall be installed in accordance with the provisions of Chapter 9 of the *International Building Code*.

**Exception:** Standpipes shall be either temporary or permanent in nature, and with or without a water supply, provided that such standpipes conform to the requirements of Section 905 of the *International Building Code* as to capacity, outlets and materials.

**[B]1306.4 Water supply.** Water supply for fire protection, either temporary or permanent shall be made available as soon as combustible material accumulates.

## **SECTION 1307 AUTOMATIC SPRINKLER SYSTEM**

**1307.1 Completion before occupancy.** In portions of a building where an automatic sprinkler system is required by this code, it shall be unlawful to occupy those portions of the building until the automatic sprinkler system installation has been tested and approved, except as provided in Section 110.4.

**[B]1307.2 Operation of valves.** Operation of sprinkler control valves shall be permitted only by properly authorized personnel and shall be accompanied by notification of duly designated parties. When the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.



# CHAPTER 14

## REFERENCED STANDARDS

### AISC

American Institute of Steel Construction  
One East Wacker Drive, Suite 3100  
Chicago IL 60601-2001

Standard reference number		Referenced in code section number
AISC	Steel Design Guide Series 12-Modifications of Existing Welded Steel Moment Frame Connections	

### ASCE

American Society of Civil Engineers  
1801 Alexander Bell Drive  
Reston VA 20191-4400

Standard reference number	Title	Referenced in code section number
ASCE 31-XX	Seismic Evaluation of Existing Buildings (updated version of FEMA 310) . . . . .	407.1.1, 407.1.1.3, Table 407.1.1.2
SEI/ASCE 11-99	Guideline for Structural Condition Assessment of Existing Buildings	

### FEMA

Federal Emergency Management Agency  
Federal Center Plaza  
500 C Street S.W.  
Washington DC 20472

Standard reference number	Title	Referenced in code section number
FEMA 351	Recommended Seismic Evaluation and Upgrade Criteria for Existing Welded Steel	
FEMA 352	Recommended Post-Earthquake Evaluation and Repair Criteria for Welded Steel Moment-Frame Buildings	
FEMA 356	Pre-standard for the Seismic Rehabilitation of Buildings (updated version of FEMA 273) . . . . .	407.1.1.1, 407.1.1.2, 407.1.1.3, Table 407.1.1.2

### ICC

International Code Council  
5203 Leesburg Pike, Suite 708  
Falls Church VA 22041

Standard reference number	Title	Referenced in code Section number
ICC EC	ICC Electrical Code . . . . .	107.3, 503.3, 608.1, 808.1, 808.2, 808.3, 808.4

IBC	International Building Code . . . . . 101.1, 102.4.2, 106.1.1.1, 109.3.8, 202, 301.4, 401.4, 402.1, 403.2, 407.1.1.1, 407.1.1.2, 407.1.1.1.3, T407.1.1.2, 407.1.2, 407.2, 407.3.1, 407.2.3.1.1, 407.3.5, 501.2, 501.3, 503.1, 503.2, 503.3, 506.1, 507.2.1, 601.3, 602.1, 603.2.1, 603.3.2, 603.4, 603.5.2, 604.2, 604.2.2, 604.2.3, 604.2.4, 604.3, 605.3.1, 605.4.3, 605.5, 605.6, 605.7.1, 605.8.1, 605.9.2, 605.10.2, 607.1, 607.2, 607.4, 607.4.1, 607.4.3, 704.1.2, 704.2, 704.2.1, 705.2, 705.3, 707.2, 707.3, 707.5.1, 707.6, 707.7, 801.1, 802.1, 807.1, 807.2, 807.3.1, 812.1.1, 812.1.2, 812.3.1, 812.4.1.1, 812.4.1.2, 812.4.1.3, 812.4.2.1, 812.4.2.2, 812.4.2.3, 812.4.3.1, 812.4.3.3, 812.4.4.1, 812.4.4.3, 812.5, 902.1, 902.2, 903.1, 903.2, 903.3, 903.3.1, 903.3.2, 903.4, 903.5, 904.1, 904.2, 1001.4, 1002.3, 1002.5, 1004.2, 1004.9, 1004.16, 1005.1.4, 1101.2, 1102.1, 1102.2, 1102.2.1, 1102.3, 1102.4, 1102.5, 1102.6, 1201.2.2, 1201.2.3, 1201.2.4, 1201.2.5, 1201.3.3, 1201.4.1, 1201.6.1, 1201.6.1.1, 1201.6.2, 1201.6.2.1, 1201.6.3.1, 1201.6.3.2, 1201.6.4.1, 1201.6.5, 1201.6.5.1, 1201.6.6, 1201.6.7.1, 1201.6.8, 1201.6.9.1, 1201.6.10.1, 1201.6.11, 1201.6.11.1, 1201.6.12.1, 1201.6.15.1, Table 1201.6.15, 1201.6.16.1, 1201.6.17, 1201.6.17.1, 1201.6.18, 1201.6.18.1, 1201.6.19, B1301.6.4.1, B1201.6.7, B1306.3
IECC	International Energy Conservation Code . . . . . 503.3, 906.1
IFC	International Fire Code . . . . . 101.4, 603.2.1, 603.2.3, 604.4.1.1, 604.4.1.2, 604.4.1.3, 604.4.1.5, 604.4.3, 1201.3.2, 1201.6.8.1, 120.6.14, 1201.6.14.1, 1304.1, 1304.2
IMC	International Mechanical Code . . . . . 101.2, 503.3, 609.1, 702.1.1, 702.2.1, 809.1, 1201.6.7.1, 1201.6.8, 1201.6.8.1
IPC	International Plumbing Code . . . . . 101.2, 410.2, 503.3, 610.1, 810.1, 810.2, 810.3, 810.5, 1301.5
IPMC	International Property Maintenance Code . . . . . 101.4, 101.5, 1101.2, 1201.3.2



# **APPENDIX A**

## **GUIDELINES FOR SEISMIC RETROFIT OF EXISTING BUILDINGS (GSREB)**

(The GSREB will be printed in its entirety under Appendix A)



## **RESOURCE A**

### **GUIDELINES FOR FIRE RATINGS OF ARCHAIC MATERIALS AND ASSEMBLIES**

(This document will be printed in its entirety under Resource A)